

Audio Systems

Basic Service Data



Technical Publications
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SERVICE DATA INDEX

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SAFETY NOTICE

USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by a () on schematics and on the parts list in this Service Data and its bulletins. Before servicing this instrument, it is important that the service technician read and follow the "Safety Precautions" in the Basic Service Data.

GENERAL AND SAFETY INFORMATION

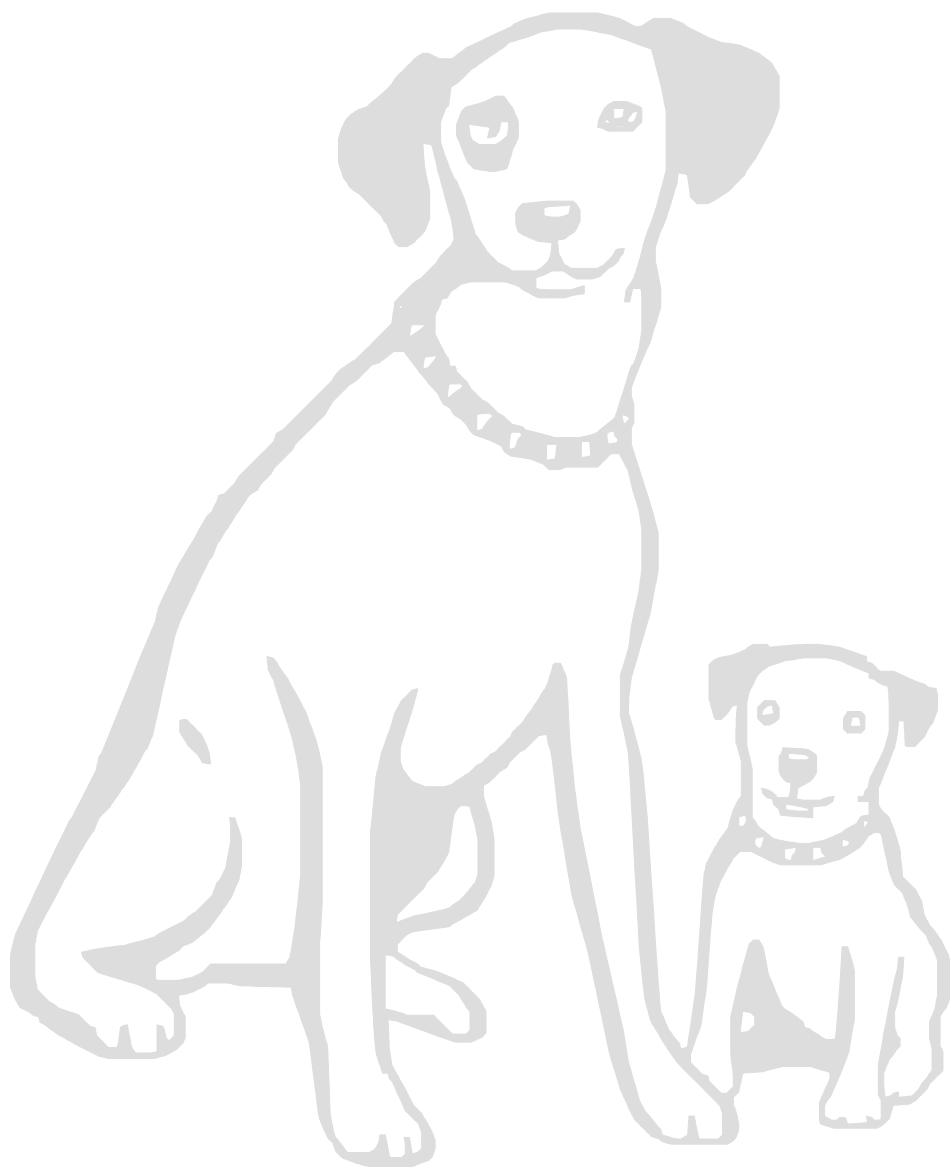
Safety Precautions

Mode Switch (Program Switch) Assembly Point

How To Manually Eject A Cassette Tape

Extension Cable Connections (VRD120HF Only)

Specifications



VRD100/VRD120HF

GENERAL AND SAFETY



Safety Precautions

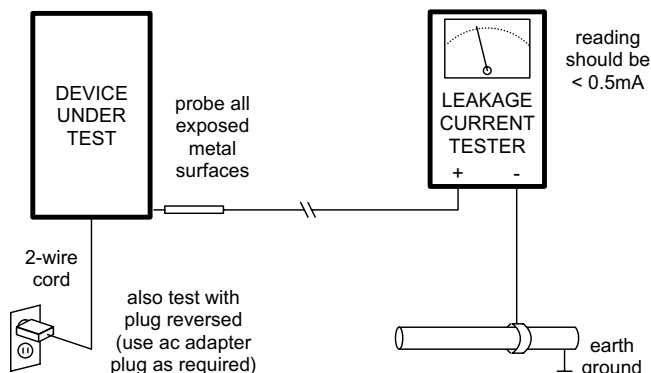
1. **Before returning the instrument to the customer**, always make a safety check of the entire instrument, including, but not limited to, the following items:

- a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing. (1) Protective shields are provided on this instrument to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reassembling the instrument, be sure to put back in place all protective devices, including, but not limited to, nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage, and may expose themselves and others to possible injury.**
- b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) excessively wide cabinet ventilation slots, and (2) improperly fitted and/or incorrectly secured cabinet covers.

- c. **Leakage Cold Check** - With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the *on* position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each push button/customer control, exposed metal screws, metallized overlays and to each cable connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohm an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the AC switch in the *off* position.

- d. **Leakage Current Hot Check**

On completely assembled instrument, plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) *C101.1 Leakage Current for Appliances* and Underwriters Laboratories (UL) *1492 (Section 67)*. Measure for current from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal or conductive parts of the instrument (antenna connections, handle bracket, metal cabinet, screwheads, metallic overlays, push-buttons, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milliamp. Reverse the instrument power cord plug in the outlet and repeat the test.



ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING TO ANTENNA OR ACCESSORIES.

- e. **Interconnected Equipment AC Leakage Test**

Avoid shock hazards. The instrument, accessory, or cable(s) to which this instrument is connected should have the applicable sections of the leakage resistance cold check and the leakage current hot check performed. Do not connect this instrument to an antenna, cable or accessory that exhibits excessive leakage currents.

2. Read and comply with all caution and safety-related notes on or inside the instrument cabinet, and on the chassis.
3. **Design Alteration Warning** - *Do not* alter or add to the mechanical or electrical design of this instrument. Design alterations and additions, including, but not limited to, circuit modifications and the addition of items such as auxiliary audio output connections, cables and accessories, etc., might alter the safety characteristics of this instrument and create a hazard to the user. Any design alterations or additions will void the manufacturer's warranty and will make you, the servicer responsible for personal injury or property damage resulting therefrom.
4. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: (a) near sharp edges, (b) near thermally hot parts - be sure that leads and components do not touch thermally hot parts, and (c) the AC supply. Always inspect in all areas for pinched, out-of-place, or frayed wiring. Do not change spacing between components and the printed-circuit board. Check AC power cord for damage.
5. Components, parts and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.
6. **PRODUCT SAFETY NOTICE** - Many electrical and mechanical parts have special safety-related characteristics, some of which are often not evident from visual inspection, nor can the protection they give be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified in this service data by a (Δ) on schematics and in the parts list. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part in this service data parts list might create shock, fire and/or other hazards. Product Safety is under review continuously and new instructions are issued whenever appropriate. For the latest information, always consult the appropriate current service literature.



VRD100/VRD120HF

GENERAL AND SAFETY



Mode Switch (Program Switch) Assembly Point

1. When installing the assembly full deck on the Main PCB, be sure to align the assembly point of mode switch.

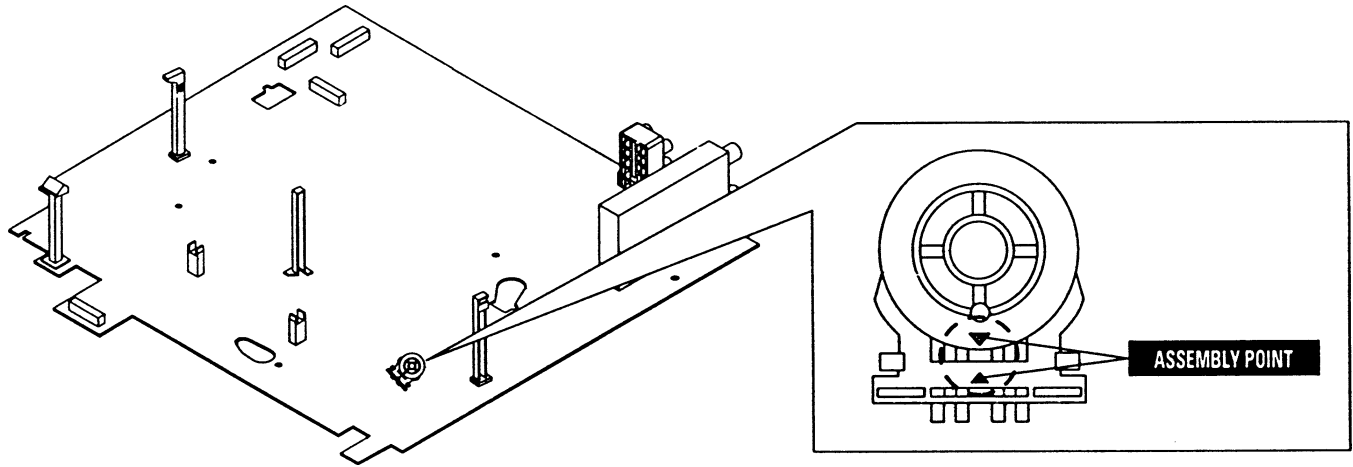


Fig. 1 - Mode Switch Assembly Point



VRD100/VRD120HF

GENERAL AND SAFETY



How To Manually Eject A Cassette Tape

If the unit does not operate when the tape is inserted into the housing unit, eject the cassette tape as instructed below:

1. Remove the Holder Worm (1) and the Gear Worm (2). (Refer to Fig. 2)
2. Turn the Gear Worm Wheel (3) counterclockwise with a screwdriver in the direction of arrow as shown in figure 2.
3. When Slider S, T approach the unloading position, insert a screwdriver into the hole of frame's bottom in order to wind the unwound tape, then rotate Holder Clutch counterclockwise as shown in figure 3.

Note: To avoid tape damage and contamination from grease, do not rotate the Gear Worm Wheel continuously when tape is in stage of unwinding. Be sure to wind the unwound tape with the unit in a horizontal position.

4. Rotate Gear Worm Wheel (3) counterclockwise using a screwdriver up to the state of eject mode and then pick out the tape. (Refer to Fig. 2).

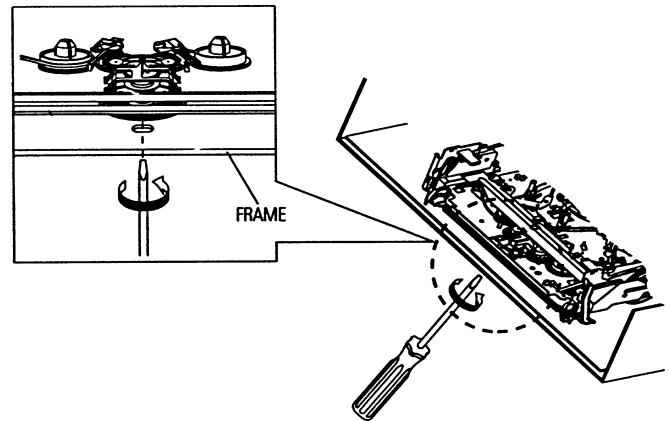


Fig. 3 - How To Eject The Cassette Tape

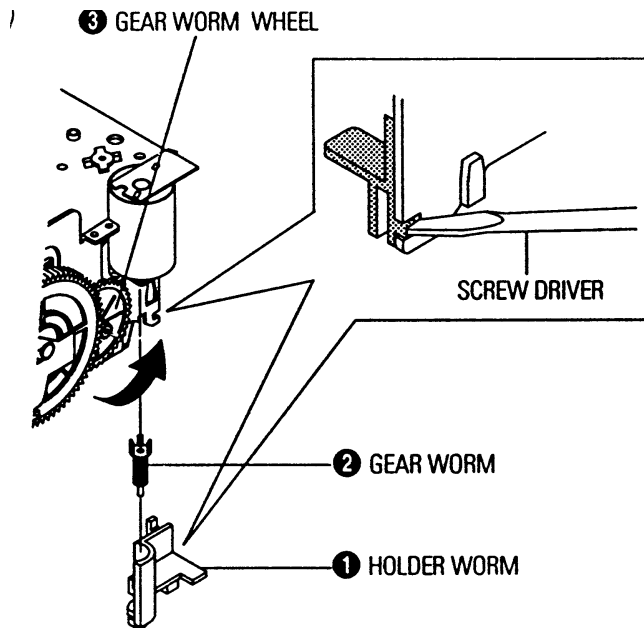


Fig. 2 - How To Eject The Cassette Tape



VRD100/VRD120HF
GENERAL AND SAFETY



Extension Cable Connections (VRD120HF Only)

Part No.	Name	Desc;Spec	Use
AC94-00093A	E/Cable-1	Pin12/600mm	Use for Main A PCB (CN101) ↔ Main B PCB (CN102) connection cable.
	E/Cable-2	Pin11/600mm	Use for Main A PCB (CN6102) ↔ Main B PCB (CN6202) connection cable.
	E/Cable-3	Pin10/600mm	Use for Main A PCB (CN5101) ↔ Main B PCB (CN5201) connection cable.

E/Cable-1 (Pin12)	E/Cable-2 (Pin11)	E/Cable-3 (Pin10)

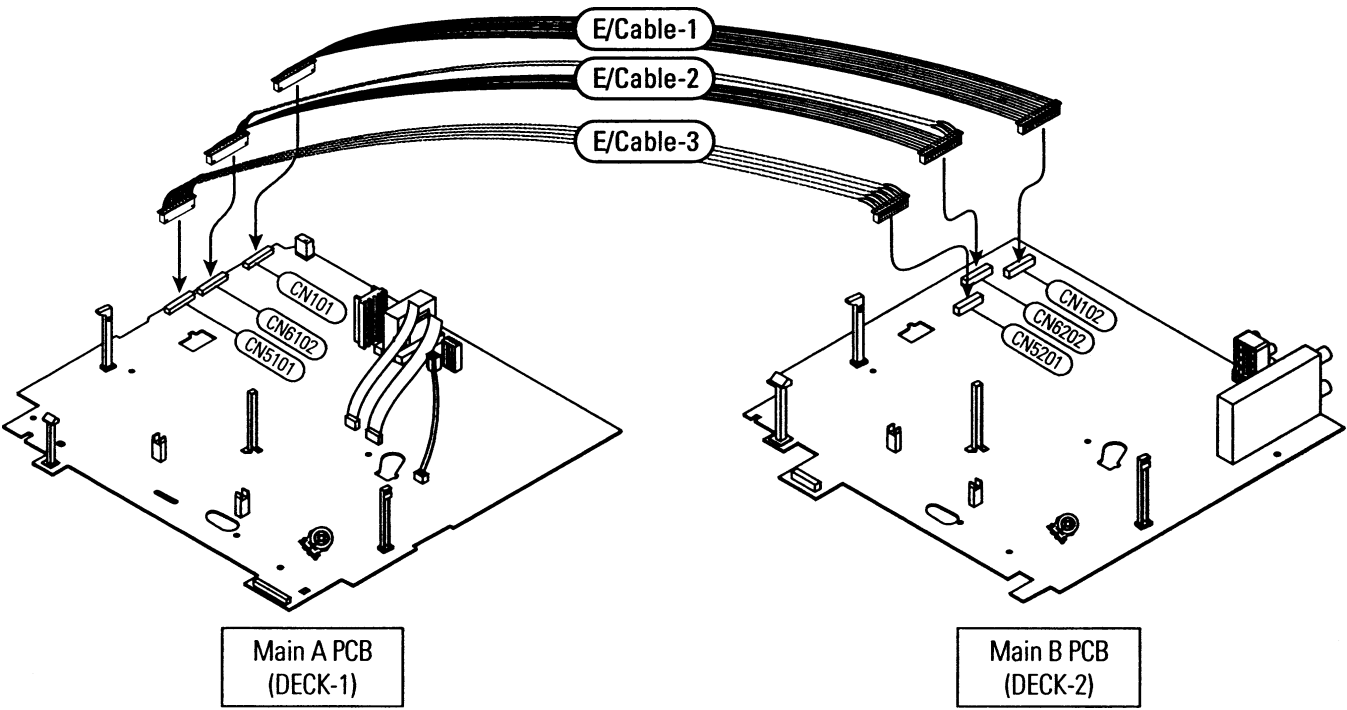


Fig. 4 - How To Connect VRD120HF Extension Cables



VRD100/VRD120HF

GENERAL AND SAFETY



Specifications

Specifications and features are subject to change without notice.

OPERATION	DESCRIPTION
Format	VHS
Record/Playback System	Video : (per deck) 4-head Audio : (per deck) stereo record playback system (VRD120HF) Audio : (per deck) mono record/playback system (VRD100)
Video Signal System	EIA standard : NTSC color
Antenna	75-ohm external VHF/UHF combined antenna terminal
Tuner	USA : 181 channels capability (125 cable channels) Canada : 178 channels capability (122 cable channels)
Type	Auto programming frequency synthesis
Power Requirement	120V AC, 60Hz
Power Consumption	32W
Dimensions	VRD120HF : 7.36 inch high (187mm) X 14.2 inch wide (360mm) X 12.4 inch deep (315mm) VRD100 : 4 inch high (100mm) X 21.6 inch wide (540mm) X 16 inch deep (400mm)
Weight	VRD120HF : 13.90 pounds (6.3kg) VRD100 : 13.70 pounds (6.2kg)
Storage Temperature Range	-22°F to +149°F (-30°C to +65°C)
Operating Temperature Range	+41°F to +104°F (+5°C to +40°C)



VRD100/VRD120HF

INSTRUMENT DISASSEMBLY



Cleaning, Lubrication and Servicing of Principal Parts

1. Table 4-1 is for normal temperature and humidity.
It is necessary to check more frequently under extreme conditions.
2. The life of the cylinder assembly depends on the operating conditions.
3. See exploded view for location of each parts.

Table 4-1

*	Parts Name	Checking Period										Remark
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000	
T A P E P A T H S Y S T E M	POST TENSION	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	- To clean the parts, use patch and alcohol (solvent).
	SLANT POST S, T	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#8 GUIDE SHAFT	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	CAPSTAN SHAFT	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	- After cleaning, use the video tape after alcohol is gone away completely.
	#9 GUIDE POST	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#3 GUIDE POST	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	GUIDE ROLLER S, T	Δ	Δ	Δ	0	0	0	0	0	0	0	- We recommend to use oil (EP-56) or solvent.
	CYLINDER ASS'Y	Δ	0	0	0	0	0	0	0	0	0	
	FE HEAD	Δ	Δ	Δ	0	0	0	0	0	0	0	
	ACE HEAD	Δ	0	0	0	0	0	0	0	0	0	- One or two drops of oil should be applied after cleaning with alcohol.
	PINCH ROLLER	Δ	0	0	0	0	0	0	0	0	0	
	POST REEL S, T		◆		◆		◆		◆		◆	
	SLEEVE TENSION		◆		◆		◆		◆		◆	- Periodic time of applying oil (Apply oil after cleaning)
	POST CENTER		◆		◆		◆		◆		◆	
	LEVER IDLE BOSS (2Point)		◆		◆		◆		◆		◆	- The excessive applying oil may be the cause of malfunction.
D R I V I N G S Y S T E M	CAPSTAN MOTOR PULLEY	Δ	Δ	Δ	Δ	Δ	0	0	0	0	0	
	BELT PULLEY				0	0	0	0	0	0	0	
	HOLDER CLUTCH ASS'Y	Δ	0	0	0	0	0	0	0	0	0	
	GEAR CENTER ASS'Y		0	0	0	0	0	0	0	0	0	
	GEAR IDLE (2Point)		0	0	0	0	0	0	0	0	0	
	LOADING MOTOR		0	0	0	0	0	0	0	0	0	
B R A K E S Y S T E M	BAND BRAKE ASS'Y		0	0	0	0	0	0	0	0	0	
	BRAKE T ASS'Y		0	0	0	0	0	0	0	0	0	



INSTRUMENT DISASSEMBLY SUBINDEX

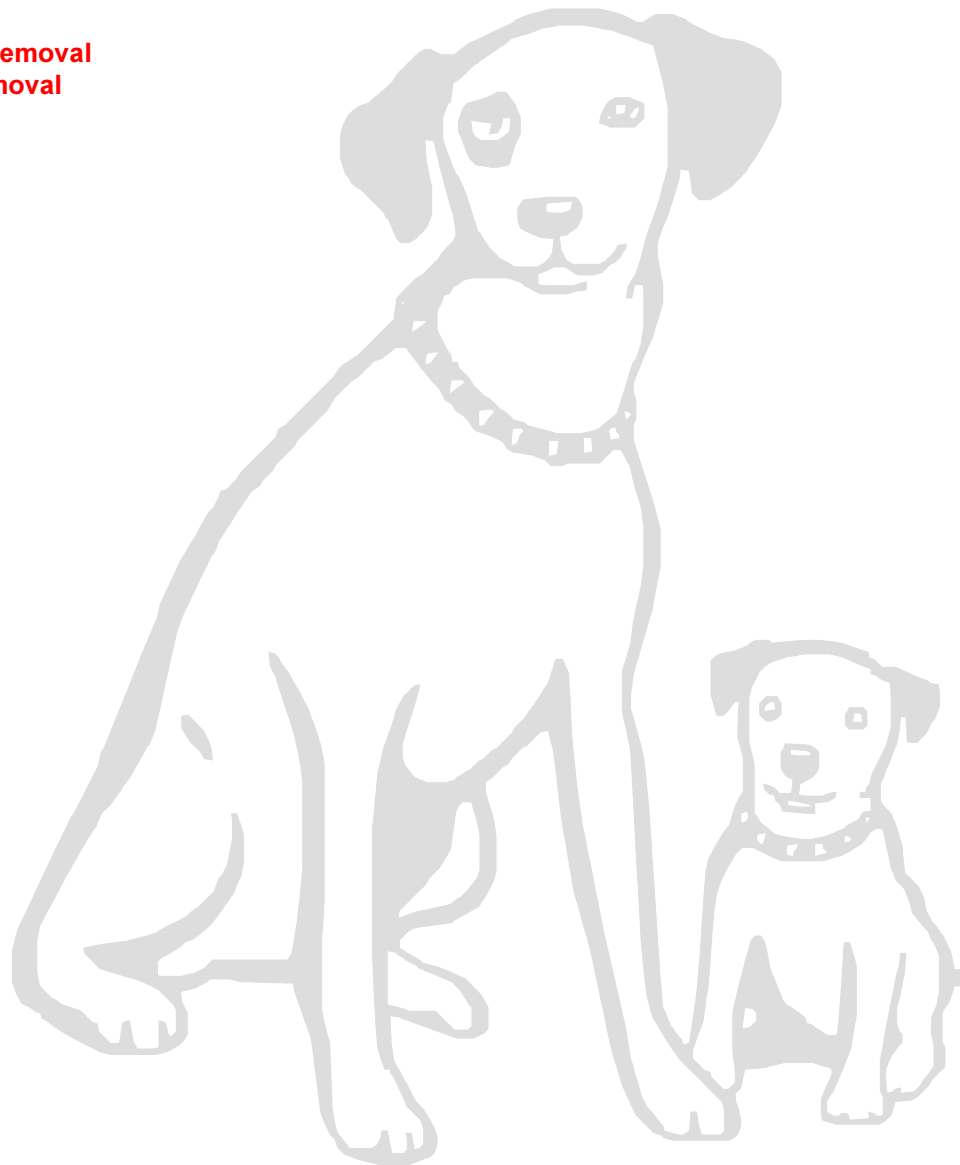
VRD120HF Circuit Board Location Guide
VRD100 Circuit Board Location Guide

VRD120HF CABINET AND PCB

Cabinet Top Removal
Front Panel Assembly Removal
Frame Removal
Bottom Cover Removal
Function-Timer PCB Removal
Chassis Removal

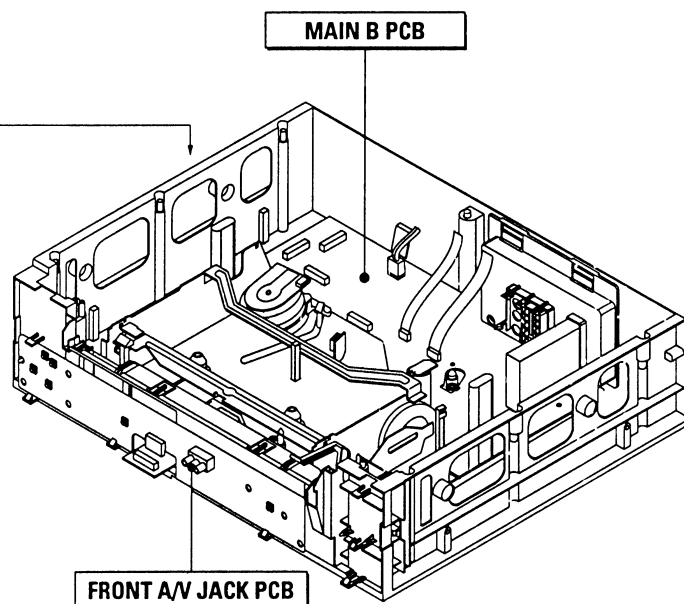
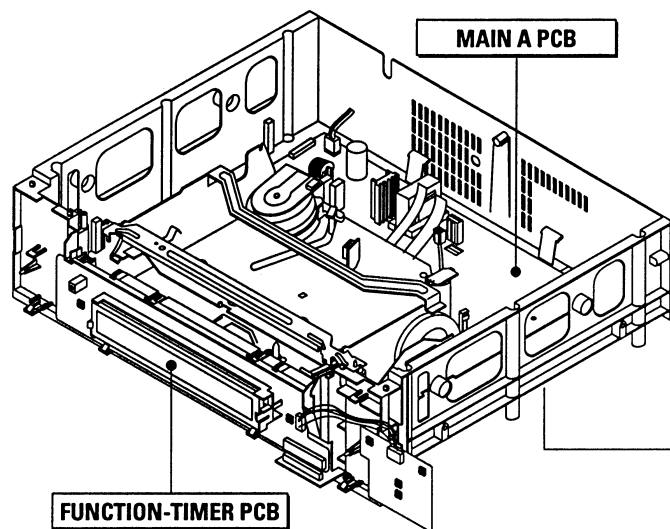
VRD100 CABINET AND PCB

Cabinet Top Removal
Bottom Cover Removal
Front Panel Assembly Removal
Function-Timer PCB Removal
Chassis Removal
Main PCB Removal



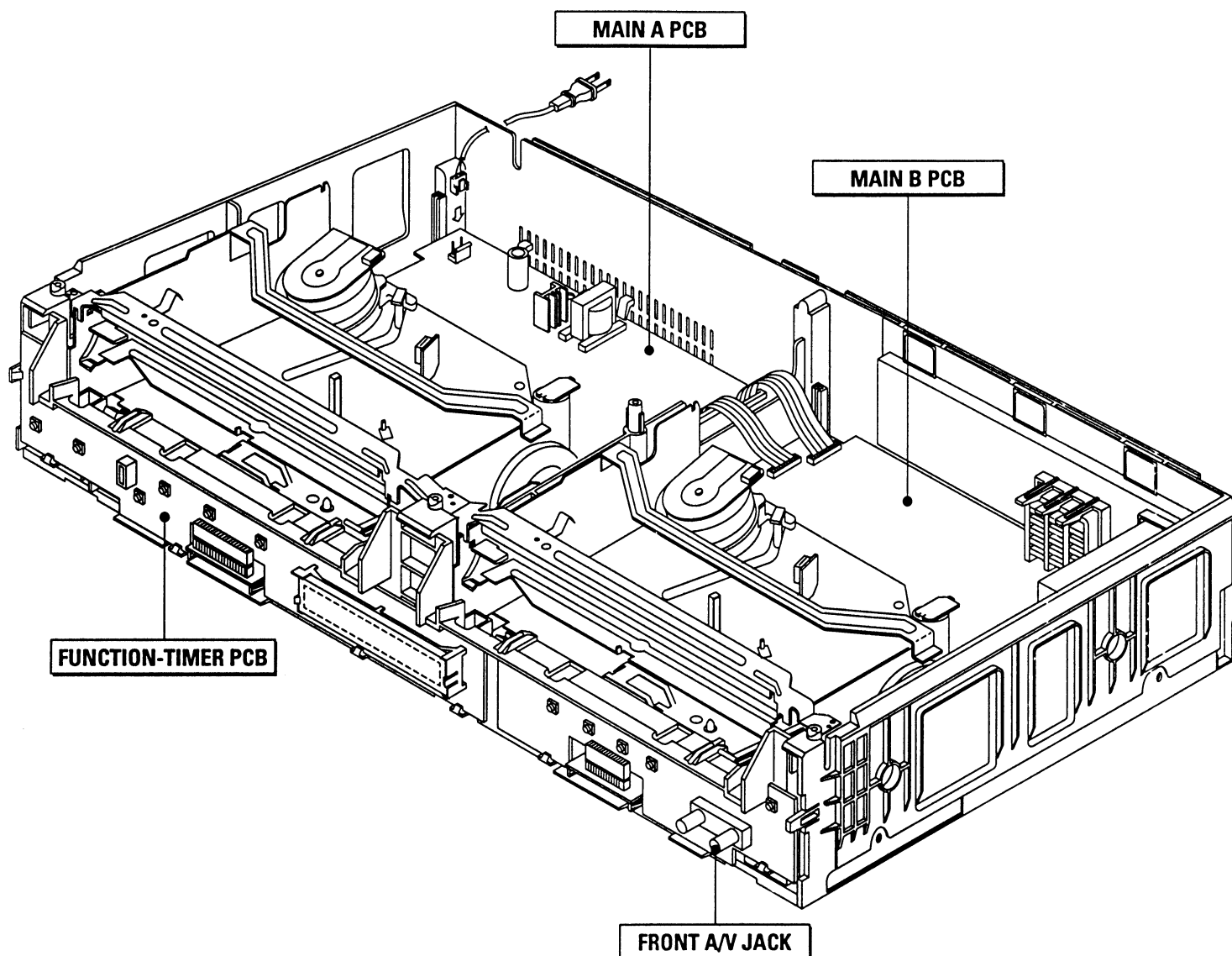
VRD100/VRD120HF INSTRUMENT DISASSEMBLY

VRD120HF Circuit Board Location Guide



VRD100/VRD120HF INSTRUMENT DISASSEMBLY

VRD100 Circuit Board Location Guide



VRD100/VRD120HF INSTRUMENT DISASSEMBLY



VRD120HF CABINET AND PCB

Cabinet Top Removal

1. Remove two (2) screws located on each side of the Cabinet Top.
2. Remove three (3) screws located at the rear of the Cabinet Top.
3. Lift the Cabinet Top from the bottom in the direction of the arrow as shown in figure 1 below.

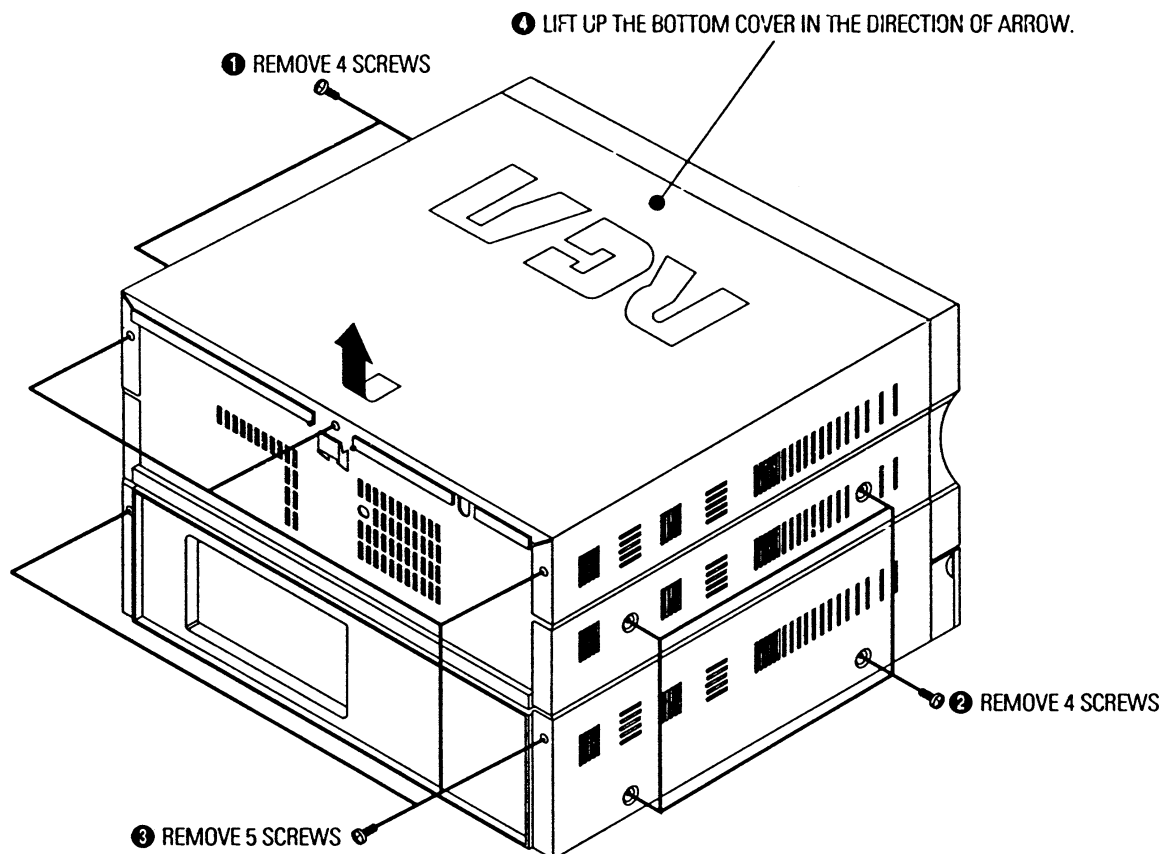


Fig. 1 - Cabinet Top Removal



VRD100/VRD120HF INSTRUMENT DISASSEMBLY



Front Panel Assembly Removal

1. Remove the Cabinet Top.
2. Release four (4) tabs located on the top of the Front Panel Assembly. Refer to figure 2.
3. There are two (2) additional tabs located on each side of the Front Panel Assembly (not shown) that also need released.
4. Finally, release three (3) tabs located on the bottom of the Front Panel Assembly. Refer to figure 3.

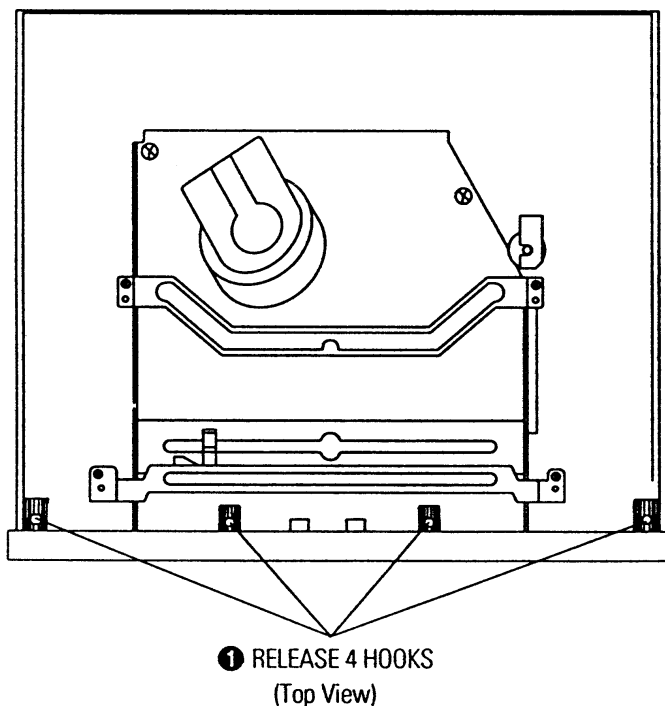


Fig. 2 - Front Panel Assembly Removal (Top View)

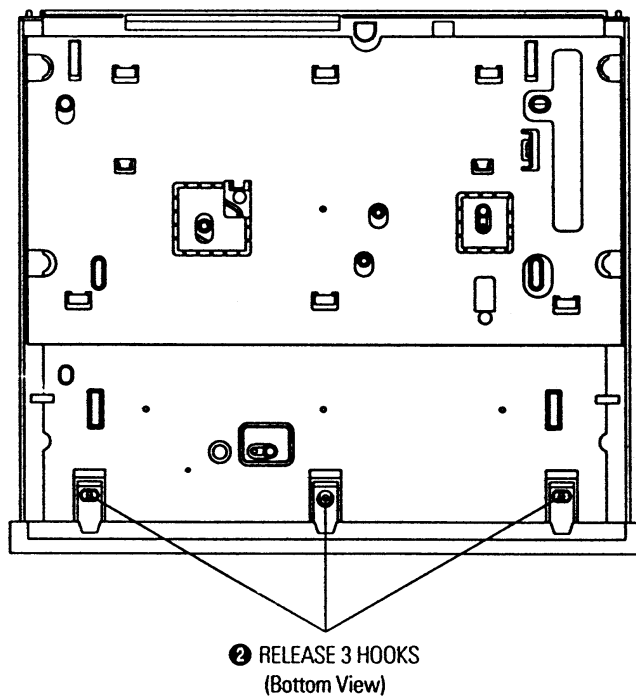


Fig. 3 - Front Panel Assembly Removal (Bottom View)



VRD100/VRD120HF INSTRUMENT DISASSEMBLY



Frame Removal

1. Remove the Cabinet Top and Front Panel Assembly.
2. Disconnect the three (3) flat ribbon wires as shown in figure 4.
3. Remove five (5) screws and separate the frames as shown.

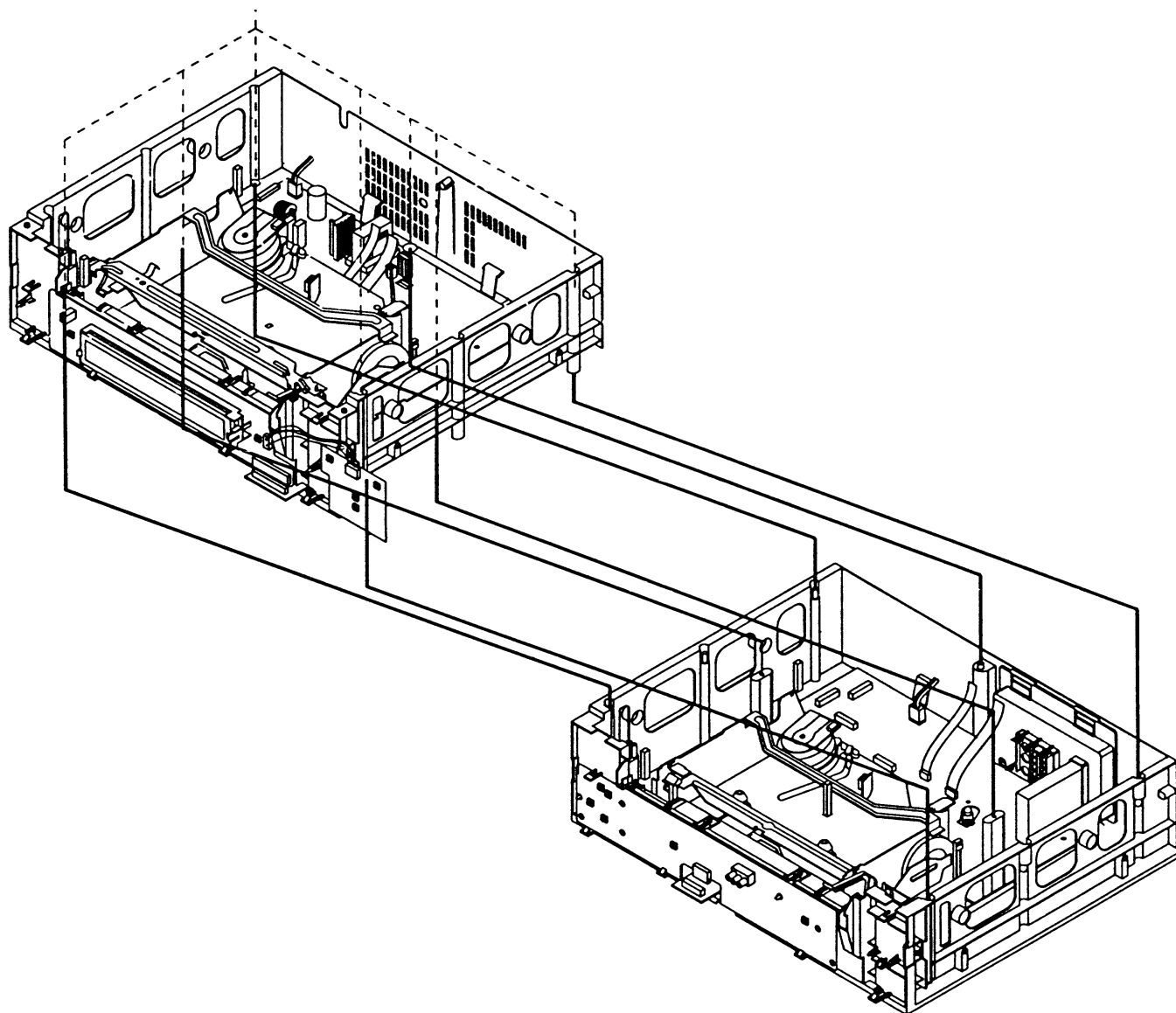


Fig. 4 - Frame Removal

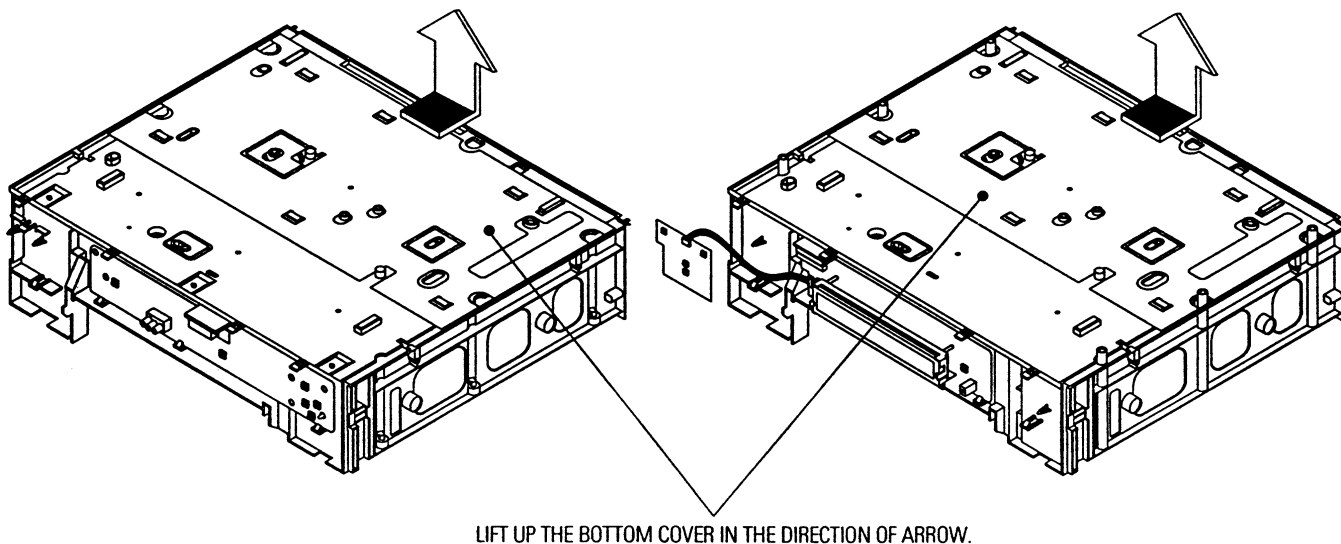


VRD100/VRD120HF INSTRUMENT DISASSEMBLY



Bottom Cover Removal

1. Remove the Cabinet Top, Front Panel Assembly and Frame.
2. Bottom Cover should slide out and up from the frame as shown in the figure below.



LIFT UP THE BOTTOM COVER IN THE DIRECTION OF ARROW.

Fig. 5 - Bottom Cover Removal

Function-Timer PCB Removal

1. Remove the Cabinet Top, Front Panel Assembly, Frame and Bottom Cover.
2. Release five (5) tabs and seven (7) tabs to unsecure the Function-Timer PCB.

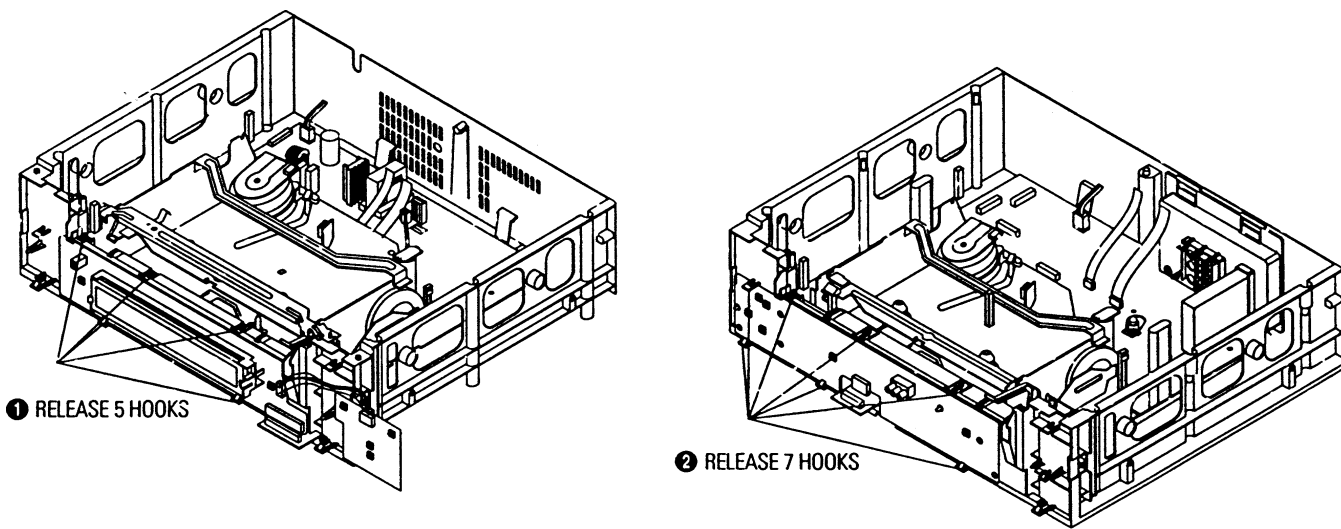


Fig. 6 - Function-Timer PCB Removal



VRD100/VRD120HF INSTRUMENT DISASSEMBLY



Chassis Removal

1. Remove the Cabinet Top, Front Panel Assembly, Frame, Bottom Cover and Function-Timer PCB.
2. Remove two (2) screws securing bracket, then remove three (3) screws securing the Main PCB.
3. And again, remove two (2) screws securing bracket, then remove three (3) screws securing Main PCB.

Note: When reinstalling the Full Deck Assembly and the Main PCB, the Assembly Point of Mode Switch Alignment must be performed on both Main PCBs.

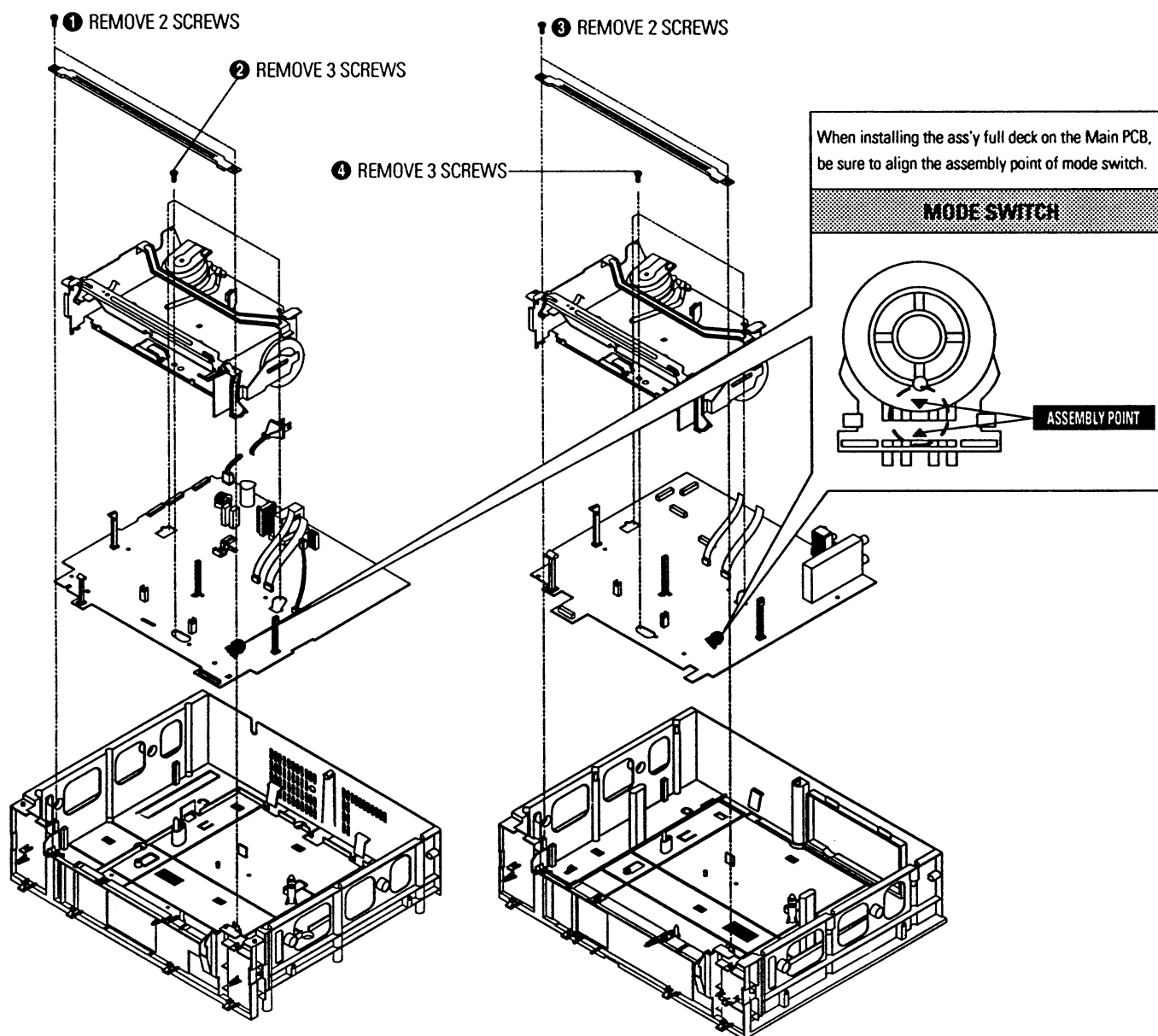


Fig. 7 - Chassis Removal



VRD100/VRD120HF INSTRUMENT DISASSEMBLY

VRD100 CABINET AND PCB

Cabinet Top Removal

1. Remove one (1) screw located on the top of the Cabinet Top.
2. Remove three (3) screws located on the backside of the unit.
3. Remove the Cabinet Top in the direction of the arrow as shown in figure 8.

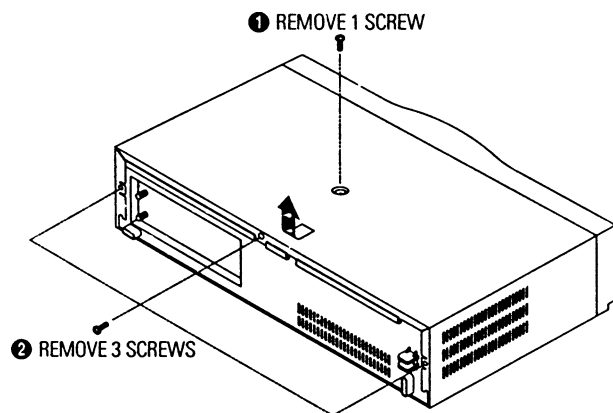


Fig. 8 - Cabinet Top Removal

Bottom Cover Removal

1. Remove four (4) screws on the underside of the unit.
2. Remove Bottom Cover.

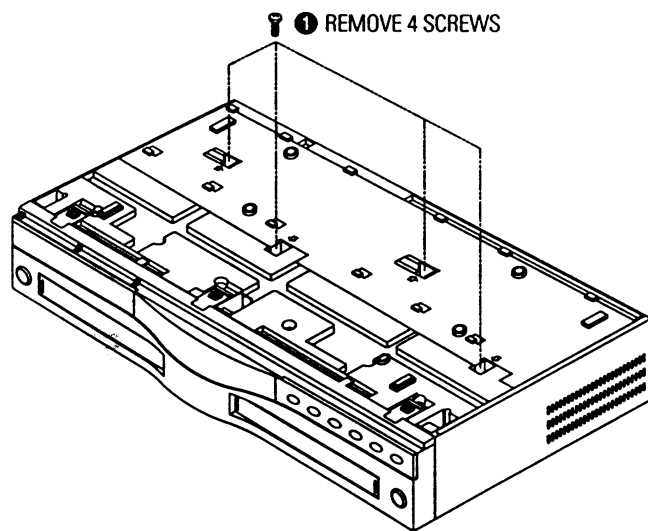


Fig. 9 - Bottom Cover Removal



Front Panel Assembly Removal

1. Release 2 sets of three (3) tabs located on both the top and the bottom of the Front Panel Assembly.
2. Pull the Front Panel Assembly out from the chassis.

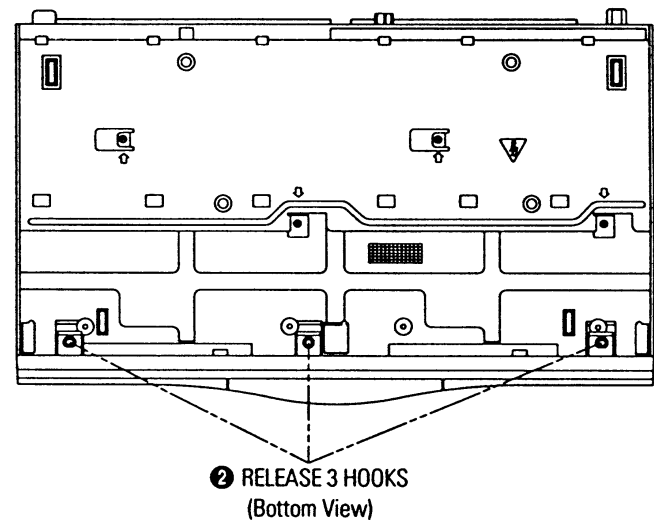
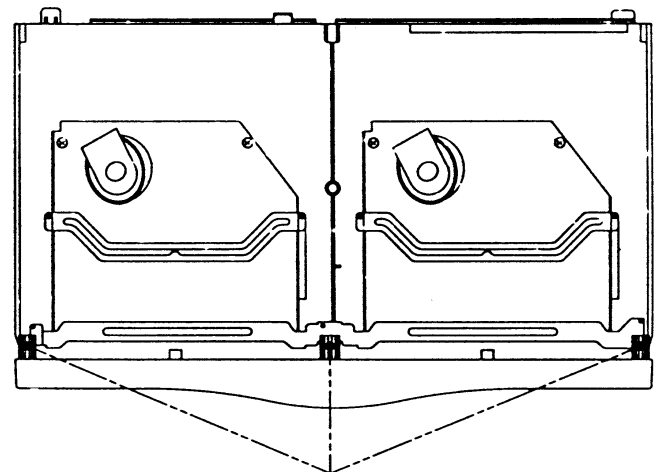


Fig. 10 - Assembly Front Panel Removal



VRD100/VRD120HF INSTRUMENT DISASSEMBLY

Function-Timer PCB Removal

1. Remove the Cabinet Top and the Front Panel Assembly.
2. Release six (6) tabs securing the Function-Timer PCB.

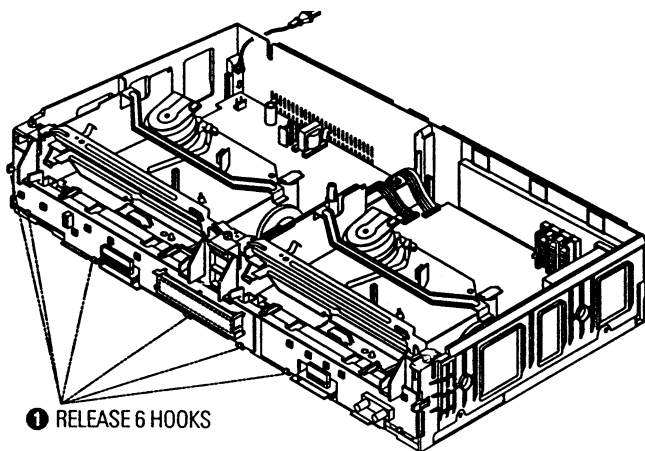


Fig.11 - Function-Timer PCB Removal



Chassis Removal

1. Remove the Cabinet Top, Front Panel Assembly and Function-Timer PCB
2. Remove two (2) connectors.
3. Remove three (3) screws.
4. Remove two (2) screws.

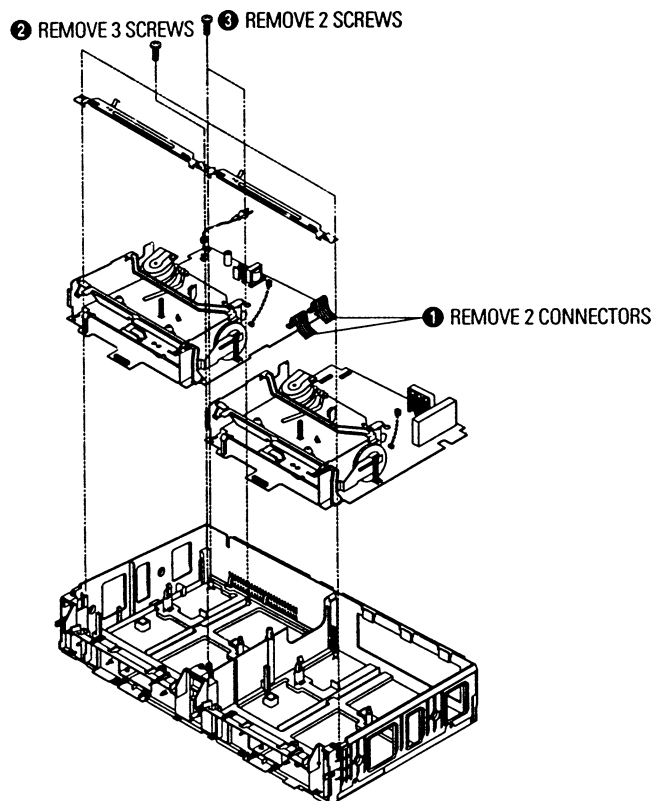


Fig. 12 - Chassis Removal



VRD100/VRD120HF INSTRUMENT DISASSEMBLY



Main PCB Removal

1. Remove the Cabinet Top, Front Panel Assembly, Function-Timer PCB and Chassis.
2. Remove two (2) sets of screws as shown below.

Note: When reinstalling the Full Deck Assembly and the Main PCB, the Assembly Point of Mode Switch Alignment must be performed on both Main PCBs.

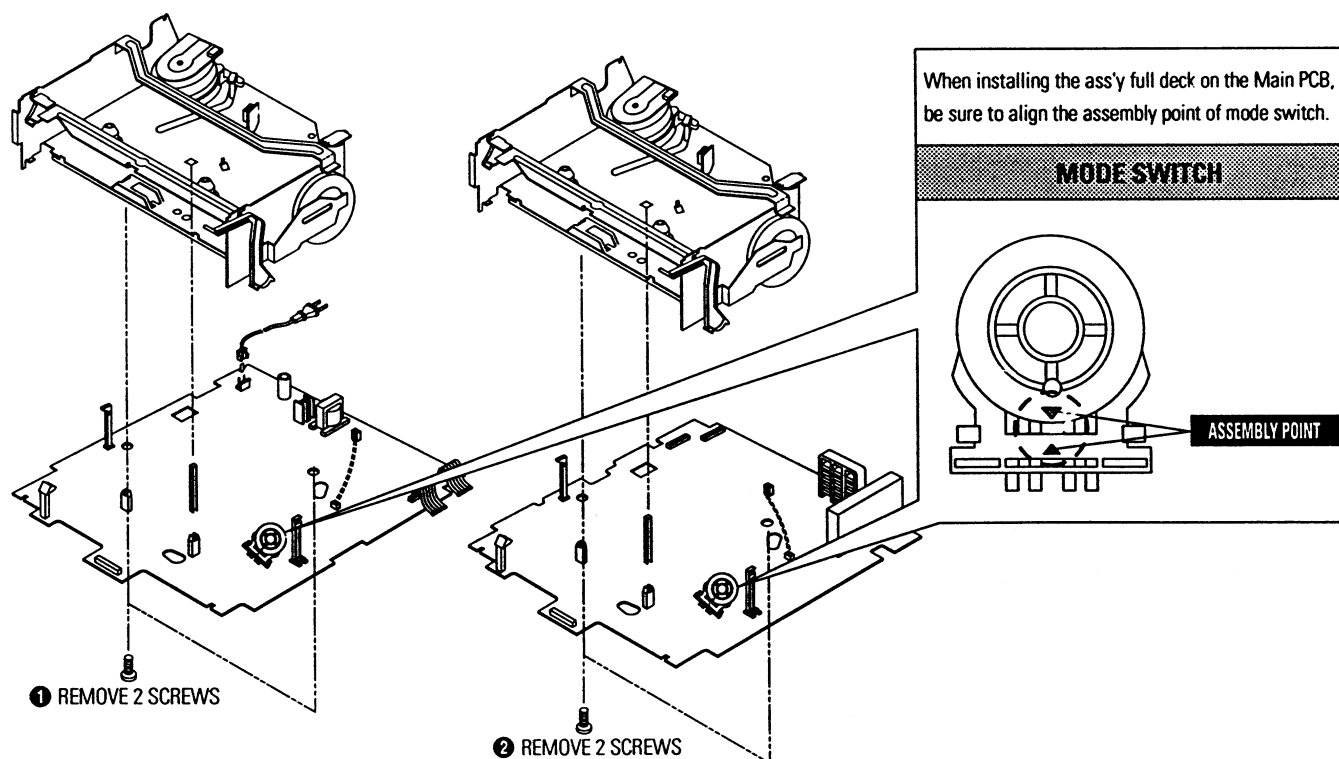


Fig. 13 - Main PCB Removal



MECHANISM DISASSEMBLY SUBINDEX

Cleaning, Lubrication, and Servicing of Principal Parts
Deck Parts Locations (Top View)
Deck Parts Locations (Bottom View)
Bracket FL Top Removal (Optional)
Lever FL Door Removal
Holder FL Cassette Assembly Removal
Lever FL Arm Assembly Removal
Slider FL Drive Removal
Bracket Gear, Gear FL Cam, Gear Joint 1,2 Removal
Assembly of Gear FL Cam, Gear Joint 1, 2
Holder Worm, Gear Worm, Gear Worm Wheel Removal
Motor Loading Assembly Removal
Gear Loading Drive, Slider Cam, Lever T, S Load Assembly Removal
Assembly of Gear Loading Drive, Slider Cam, Lever T, S Load Assembly
Lever Tension Assembly, Band Brake Assembly, Sleeve Tension Removal
Lever S, T Brake Assembly Removal
Lever Idle Assembly Removal
Disk S, T Reel Removal
Holder Clutch Assembly Removal
Lever Up Down Assembly, Gear Center Assembly Removal
Assembly of Lever Up Down Assembly, Gear Center Assembly
Guide Cassette Door Removal
Unit Pinch Assembly, Plate Joint, Spring Pinch Drive Removal
Lever #9 Guide Assembly Removal
FE Head Removal
ACE Head Removal
Slider S, T Assembly Removal
Cylinder Assembly Removal
Belt Pulley Removal
Lever Head Cleaner Assembly Removal
Motor Capstan Assembly Removal
How to Eject the Cassette Tape



VRD100/VRD120HF

MECHANISM DISASSEMBLY



Cleaning, Lubrication, and Servicing of Principal Parts

1. The table below reflects servicing for units exposed to normal temperature and humidity.
It is necessary to check more frequently under extreme conditions.
2. The life of the cylinder assembly depends on the operating conditions.
3. See exploded view for location of each parts.

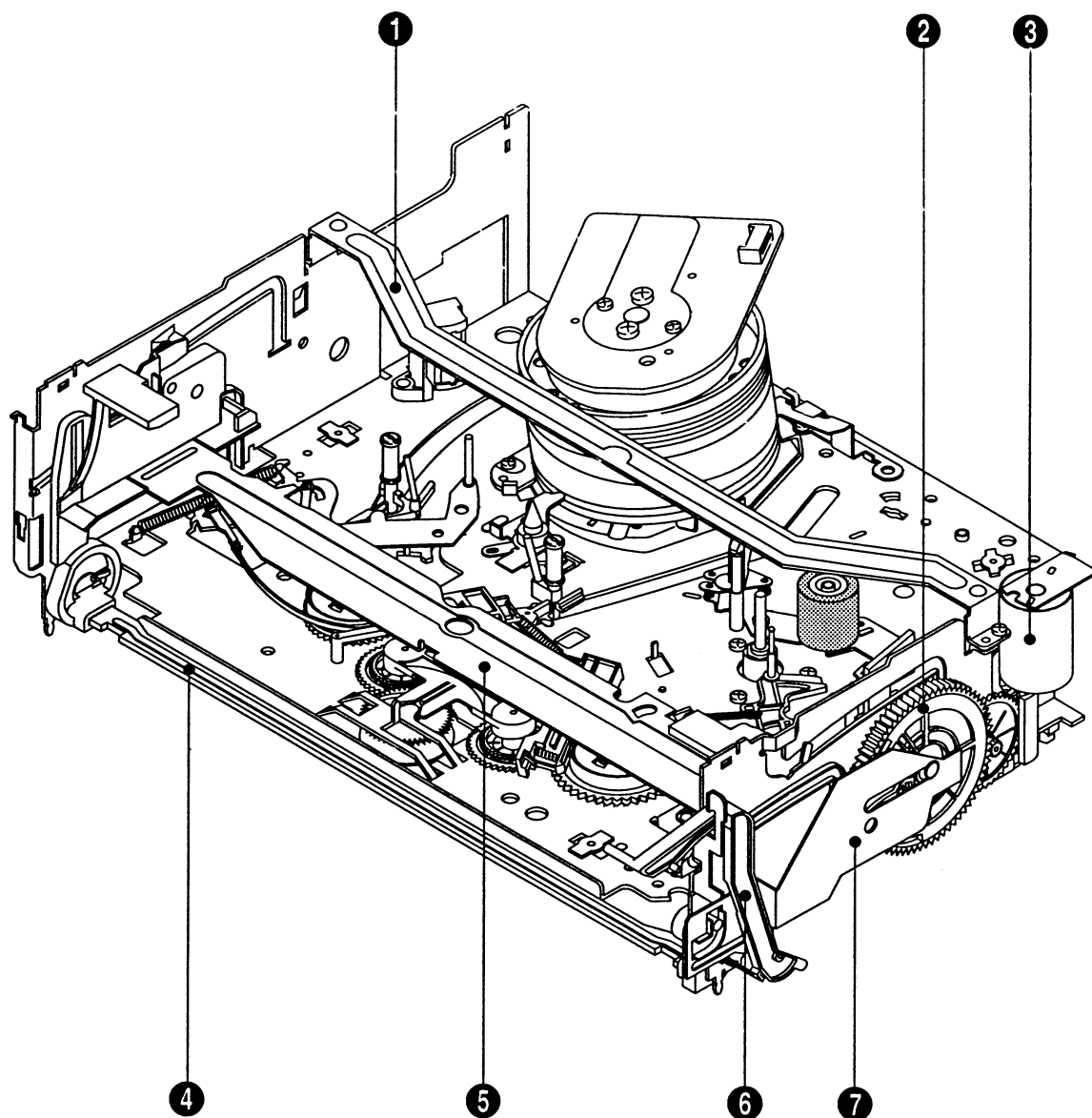
*	Parts Name	Checking Period										Remark
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000	
T A P E P A T H S Y S T E M	POST TENSION	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	- To clean the parts, use patch and alcohol (solvent).
	SLANT POST S, T	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#8 GUIDE SHAFT	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	CAPSTAN SHAFT	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#9 GUIDE POST	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	- After cleaning, use the video tape after alcohol is gone away completely.
	#3 GUIDE POST	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	GUIDE ROLLER S, T	Δ	Δ	Δ	0	0	0	0	0	0	0	- We recommend to use oil [EP-56] or solvent.
	CYLINDER ASS'Y	Δ	0	0	0	0	0	0	0	0	0	
	FE HEAD	Δ	Δ	Δ	0	0	0	0	0	0	0	- One or two drops of oil should be applied after cleaning with alcohol.
	ACE HEAD	Δ	0	0	0	0	0	0	0	0	0	
	PINCH ROLLER	Δ	0	0	0	0	0	0	0	0	0	- Periodic time of applying oil (Apply oil after cleaning) - The excessive applying oil may be the cause of malfunction.
	POST REEL S, T		◆		◆		◆		◆		◆	
	SLEEVE TENSION		◆		◆		◆		◆		◆	
	POST CENTER		◆		◆		◆		◆		◆	
	LEVER IDLE BOSS (2Point)		◆		◆		◆		◆		◆	
D R I V I N G S Y S T E M	CAPSTAN MOTOR PULLEY	Δ	Δ	Δ	Δ	Δ	0	0	0	0	0	
	BELT PULLEY				0	0	0	0	0	0	0	
	HOLDER CLUTCH ASS'Y	Δ	0	0	0	0	0	0	0	0	0	
	GEAR CENTER ASS'Y		0	0	0	0	0	0	0	0	0	
	GEAR IDLE (2Point)		0	0	0	0	0	0	0	0	0	
	LOADING MOTOR		0	0	0	0	0	0	0	0	0	
B R A K E S Y S T E M	BAND BRAKE ASS'Y		0	0	0	0	0	0	0	0	0	
	BRAKE T ASS'Y		0	0	0	0	0	0	0	0	0	



VRD100/VRD120HF MECHANISM DISASSEMBLY



Deck Parts Locations (Top View)



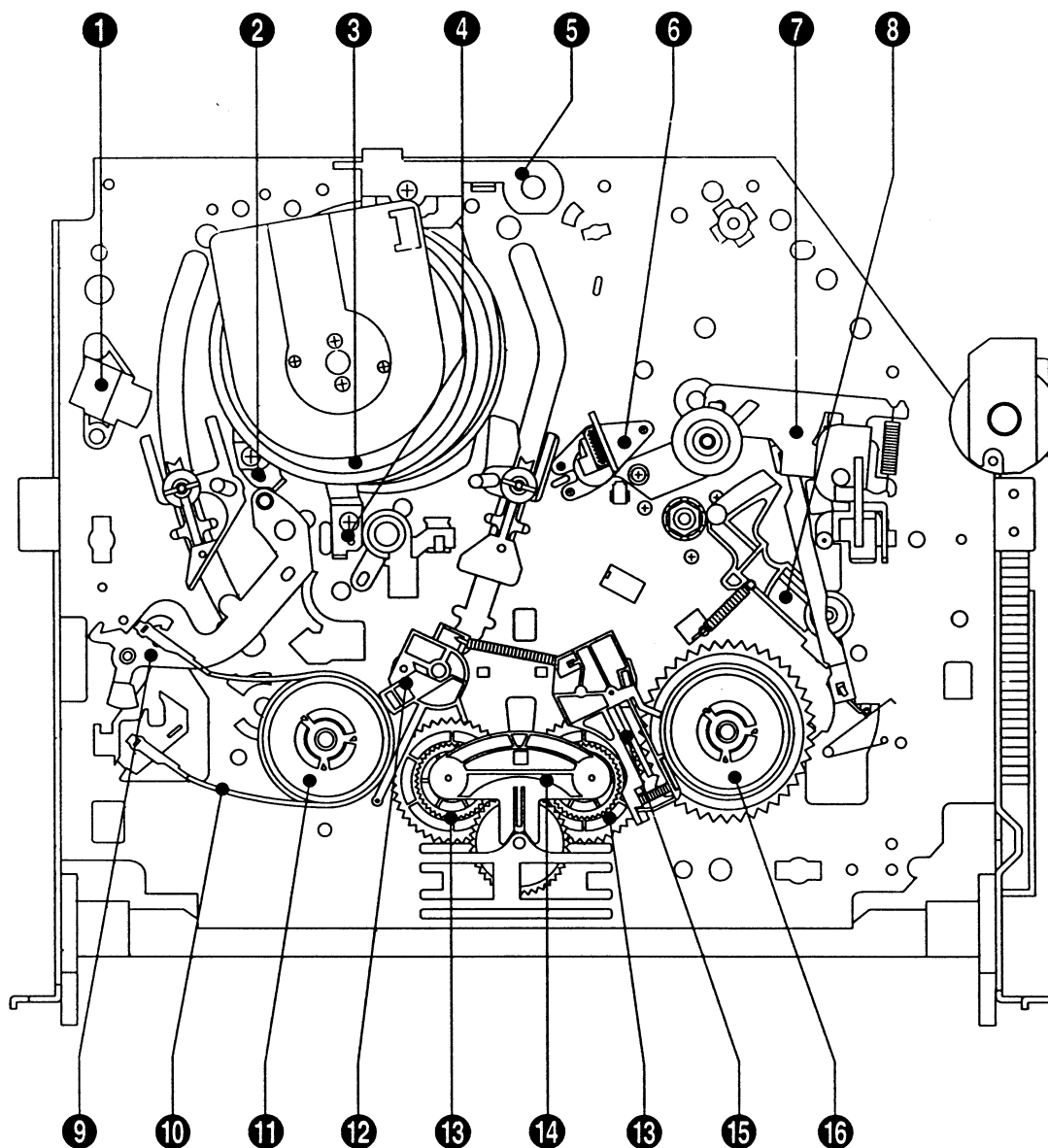
- 1 Bracket FL Top (Optional)
- 2 Gear FL Cam
- 3 Motor Loading Assembly
- 4 Lever FL Arm Assembly
- 5 Holder FL Cassette Assembly
- 6 Lever FL Door
- 7 Slider FL Drive



VRD100/VRD120HF MECHANISM DISASSEMBLY



Deck Parts Locations (Top View) (Cont'd)

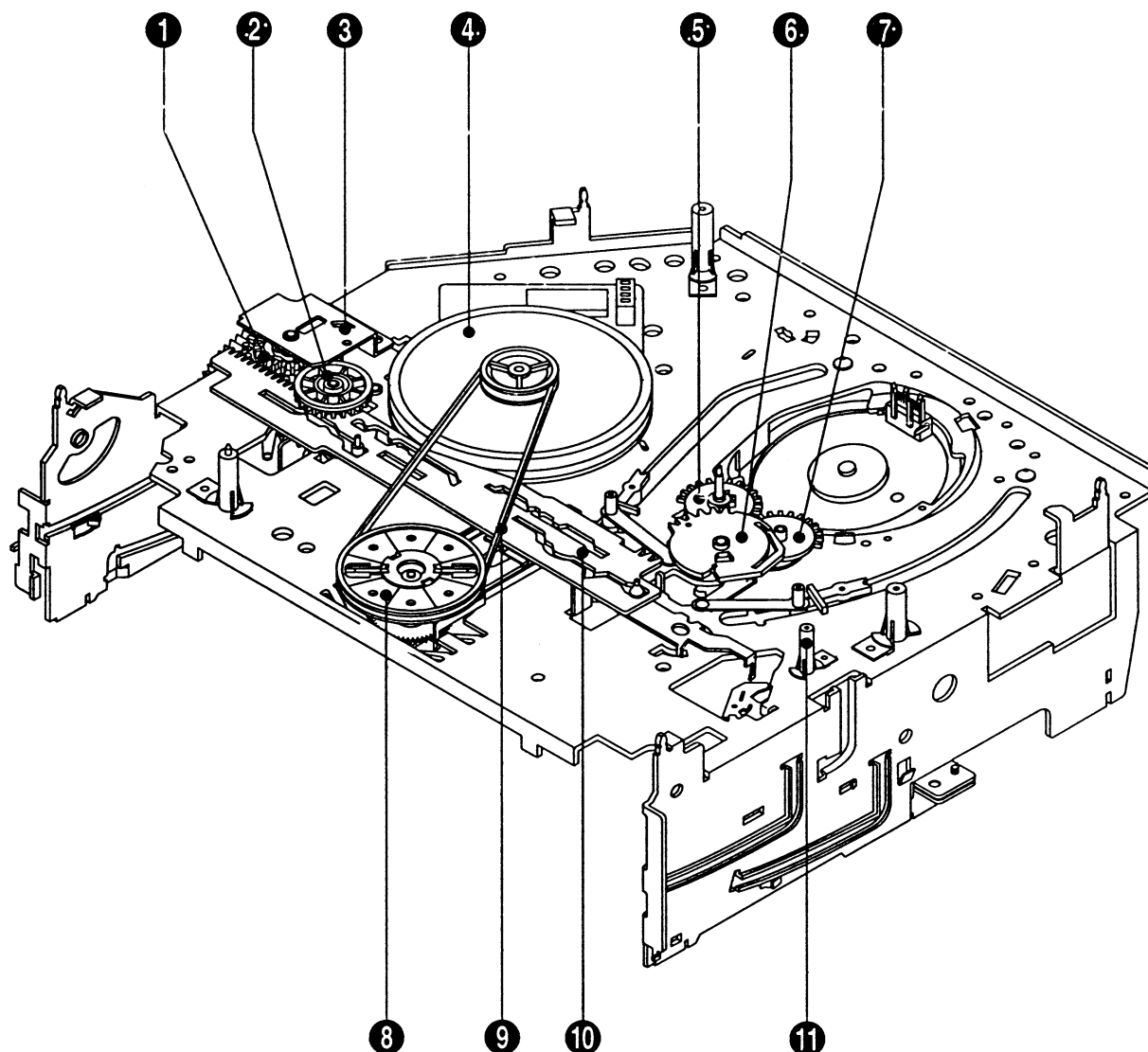


- | | |
|---------------------------|---------------------------|
| 1 FE Head | 10 Band Brake Assembly |
| 2 Plate Cylinder C | 11 Disk S Reel |
| 3 Cylinder Assembly | 12 Lever S Brake Assembly |
| 4 Plate Cylinder B | 13 Gear Idle |
| 5 Plate Cylinder A | 14 Lever Idle |
| 6 Ace Head Assembly | 15 Lever T Brake Assembly |
| 7 Unit Pinch Assembly | 16 Disk T Reel |
| 8 Lever #9 Guide Assembly | |
| 9 Lever Tension Assembly | |



VRD100/VRD120HF MECHANISM DISASSEMBLY

Deck Parts Locations (Bottom View)



- 1 Gear Joint 1
- 2 Gear Joint 2
- 3 Bracket Gear
- 4 Motor Capstan Assembly
- 5 Lever T Load Assembly
- 6 Gear Loading Drive
- 7 Lever S Load Assembly
- 8 Holder Clutch Assembly
- 9 Belt Pulley
- 10 Slider Cam
- 11 Sleeve Tension



VRD100/VRD120HF MECHANISM DISASSEMBLY

Bracket FL Top Removal (Optional)

1. Remove two (2) screws (1).
2. Remove the Bracket FL Top (2).

Note: Take care not to change assembly direction.

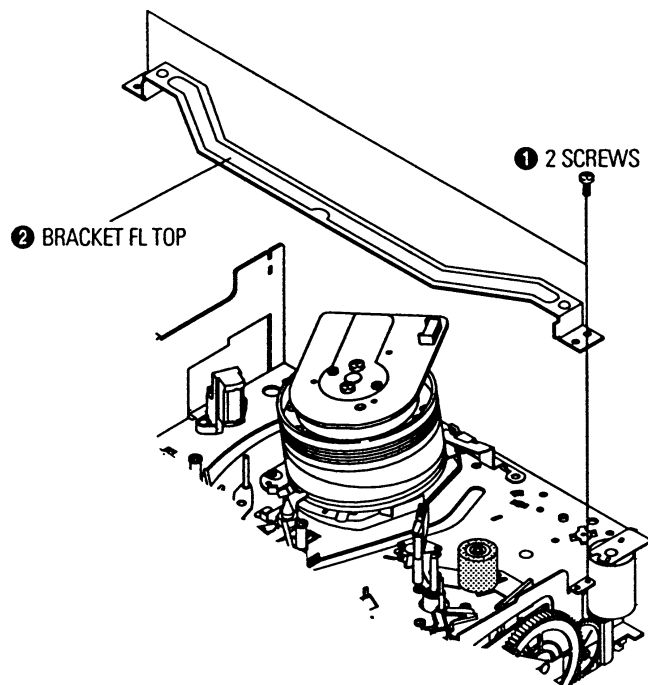


Fig. 14 - Bracket FL Top Removal



Lever FL Door Removal

1. Rotate the Lever FL Door (1) in the direction of arrow "A".
2. Release the Hook (2), remove the Lever FL Door (1) in the direction of arrow "B".

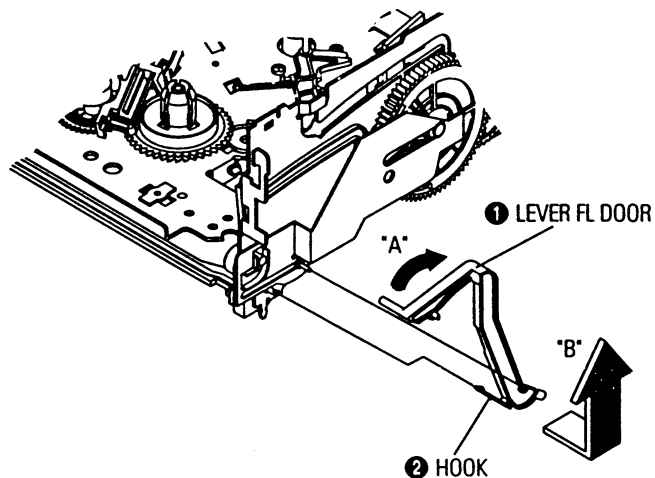


Fig. 15 - Lever FL Door Removal



VRD100/VRD120HF

MECHANISM DISASSEMBLY

Holder FL Cassette Assembly Removal

1. Remove the Lever FL Door. (Refer to Fig. 15).
2. Pull the Holder FL Cassette Assembly (1) to the eject position.
3. Pull the Holder FL Cassette Assembly (1) as grasping the Holder FL Cassette Assembly (1) and Level FL Cassette-R (2) in the same time to release hooking from Main Base until the Boss (A), (B), of Holder FL Cassette Assembly (1) is taken out from the Rail (C), (D).
4. Lift the Holder FL Cassette Assembly (1) in the direction of arrow "B" in this time, you have to grasp the Lever FL Cassette-R (2) continuously until the Holder FL Cassette Assembly (1) is taken out completely.

Note: Be sure to insert Lever FL Cassette-R (2) in the direction of "A" to prevent separation and breakage of the Lever FL Cassette-R (2) at disassembling and reassembling.

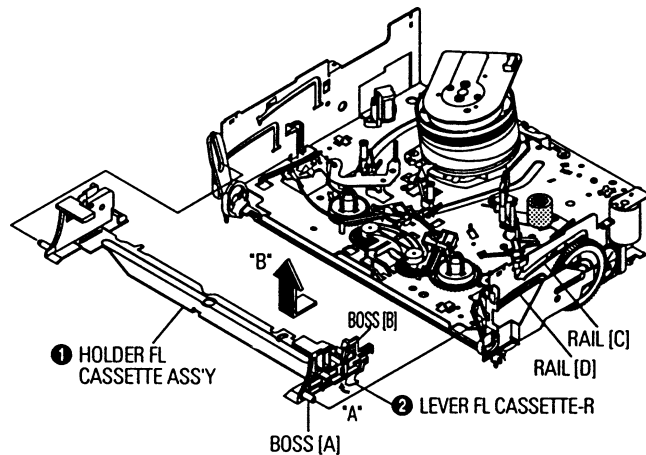


Fig. 16 - Holder FL Cassette Assembly

Lever FL Arm Assembly Removal

1. Remove the Lever FL Door. (Refer to Fig. 15).
2. Remove the Holder FL Cassette Assembly. (Refer to Fig. 16).
3. Release the Hook (1) in the direction of arrow "A", pull out the Lever FL Arm Assembly (4) from the Boss of Main Base.
4. Remove the Lever FL Arm Assembly (4) in the direction of arrow "B".

Assembly:

1. When reinstalling, be sure to reassemble Lever FL Arm Assembly (4) after you insert the Boss (2) in Groove (A) of Slider FL Drive (3).

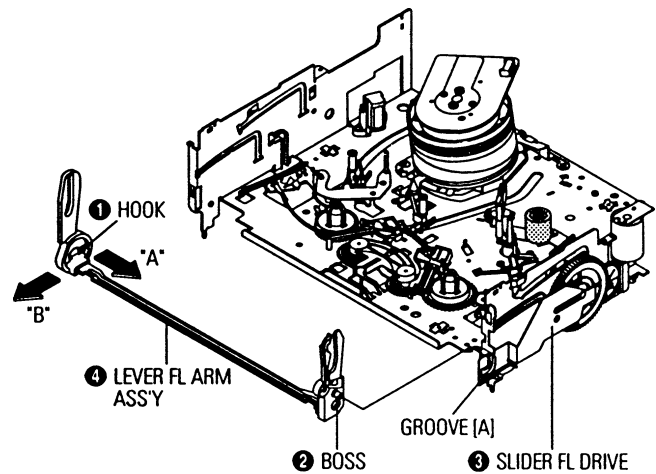


Fig. 17 - Lever FL Arm Assembly Removal

VRD100/VRD120HF MECHANISM DISASSEMBLY

Slider FL Drive Removal

1. Pull the Slider FL Drive (1) to the front direction.
2. Remove the Slider FL Drive (1) in the direction of arrow. (Refer to Fig. 15).

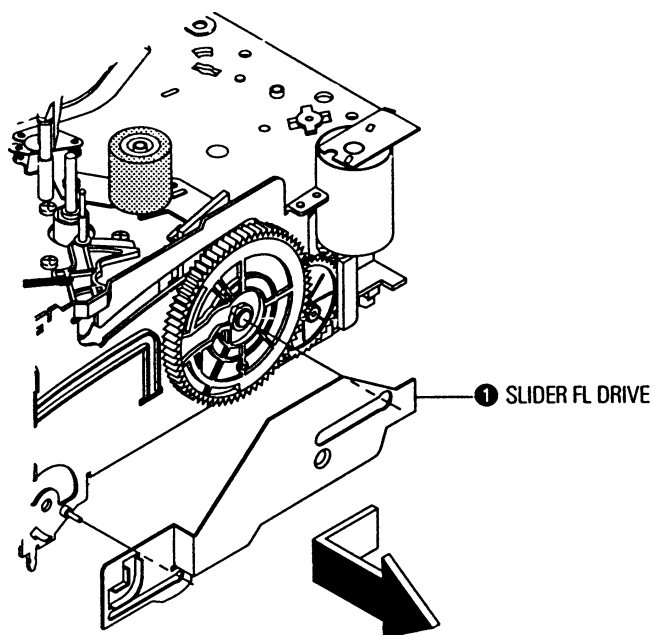


Fig. 18 - Slider FL Drive Removal

Bracket Gear, Gear FL Cam, Gear Joint 1,2 Removal

1. Remove screw (1).
2. Lift the Bracket Gear (2).
3. Remove the Gear FL Cam (3).
4. Lift the Gear Joint 2 (4), Gear Joint 1 (5).

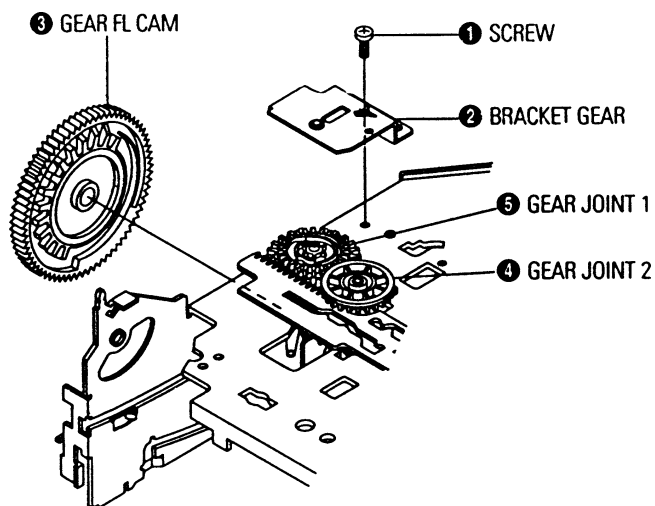


Fig. 19 - Bracket Gear, Gear FL Cam, Gear Joint 1, 2 Removal

VRD100/VRD120HF MECHANISM DISASSEMBLY

Assembly of Gear FL Cam, Gear Joint 1, 2

1. Be sure to align dot mark of Gear Joint 1 (1) with dot mark of Gear Joint 2 (2) as shown in figure 20. (Refer to Timing Point 1), confirm the Timing Point 2 of the Gear Joint 2 (2) and Slider Cam (3).
2. Align the Gear FL Cam (4) with the Gear Worm Wheel Post as shown detail drawing. (Refer to Timing Point 3).

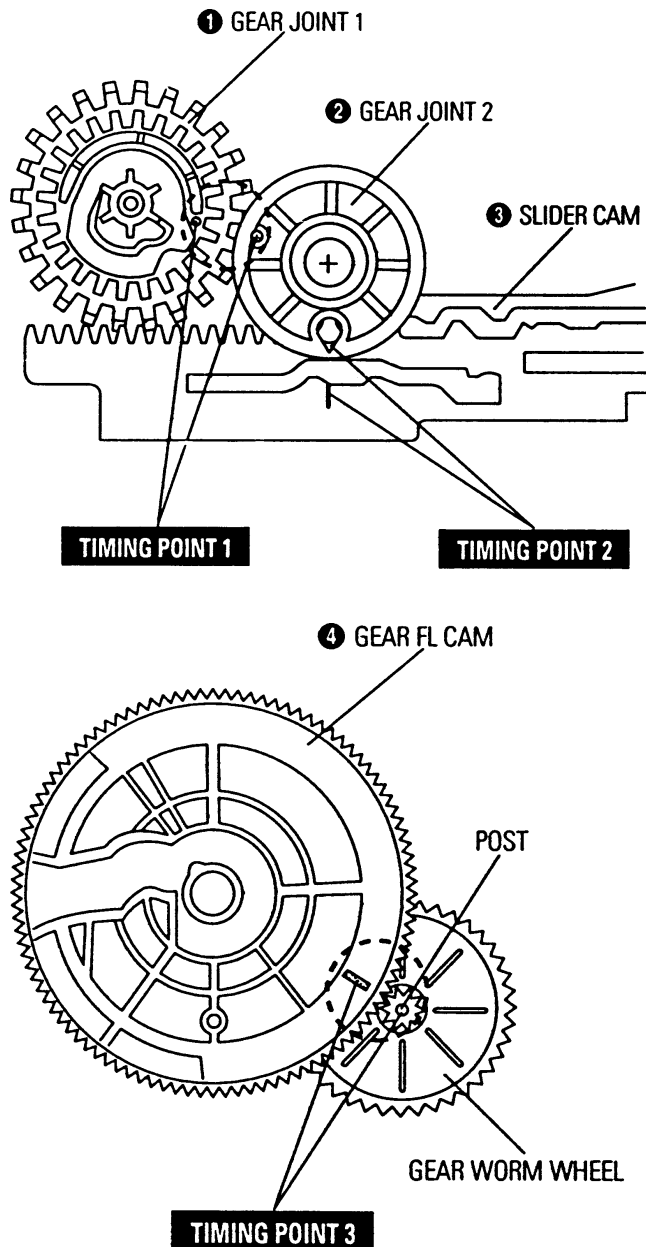


Fig. 20 - Assembly of Gear FL Cam, Gear Joint 1, 2



Holder Worm, Gear Worm, Gear Worm Wheel Removal

1. Release the Hook (A) in the direction of arrow and, remove the Holder Worm (1).
2. Remove the Gear Worm (2).
3. Remove the Gear Worm Wheel (3). (After removing the Gear FL Cam as shown figure 19).

Note: Secure the Hook (A) after installing the Holder Worm (1).

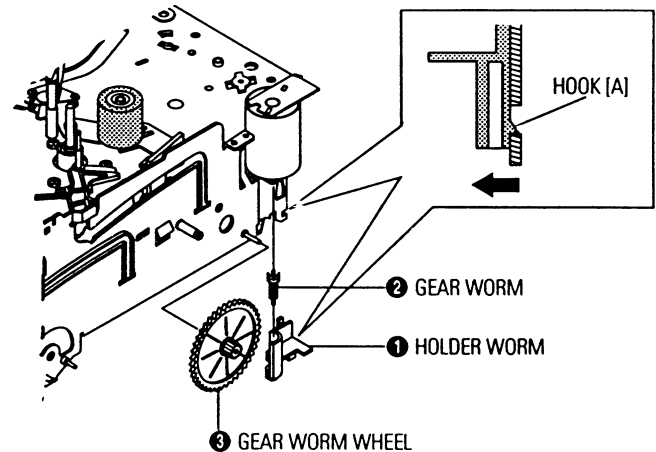


Fig. 21 - Holder Work, Gear Worm, Gear Worm Wheel Removal



VRD100/VRD120HF MECHANISM DISASSEMBLY

Motor Loading Assembly Removal

1. Remove the screw (1).
2. Remove the Motor Loading Assembly (2).

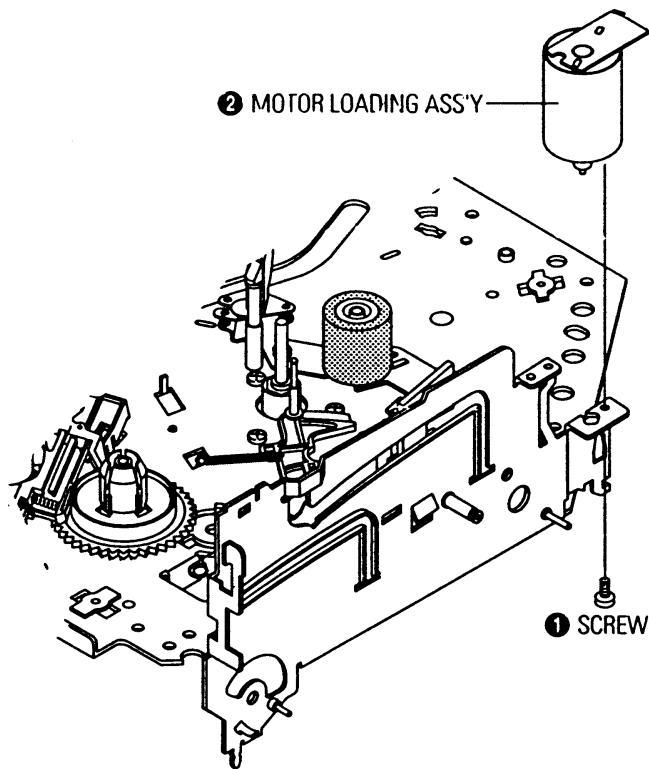


Fig. 22 - Motor Loading Assembly Removal

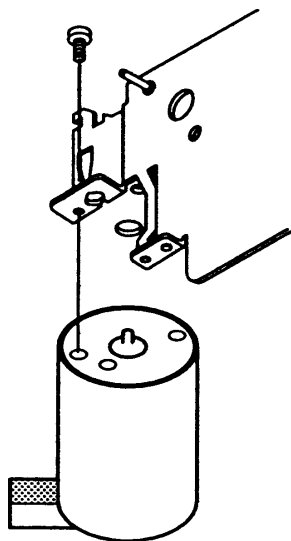


Fig. 23 - Motor Loading Assembly Removal

Gear Loading Drive, Slider Cam, Lever T, S Load Assembly Removal

1. Remove the Belt Pulley (instructions on page 28 of this section).
2. Remove the Gear Loading Drive (1) after releasing Hook (A) in the direction arrow as shown in detail drawing.
3. Remove the Slider Cam (2).
4. Remove the Lever T, S Load Assembly (3), (4).

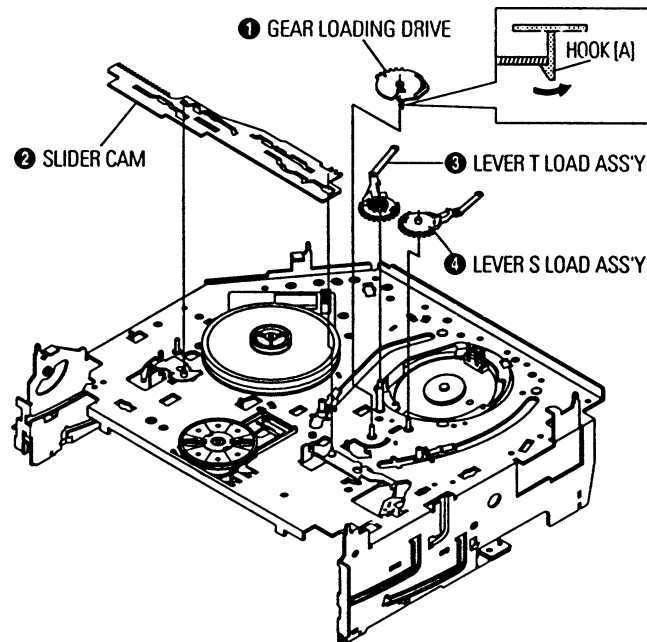


Fig. 24 - Gear Loading Drive, Slider Cam, Lever T, S Load Assembly Removal

VRD100/VRD120HF MECHANISM DISASSEMBLY

Assembly of Gear Loading Drive, Slider Cam, Lever T, S Load Assembly

1. When reinstalling, be sure to align dot of Lever T Load Assembly (1) with dot of Lever S Load Assembly (2) as shown in drawing. (Refer to Timing Point 1).
2. Insert the Pin A, B, C, D into the Slider Cam (3) hole.
3. Be sure to align dot of Lever T Load Assembly and dot of Gear Loading Drive (4). (Refer to Timing Point 2).
4. Align dot of Gear Loading Drive with mark of Slider Cam as shown in drawing. (Refer to Timing Point 3).

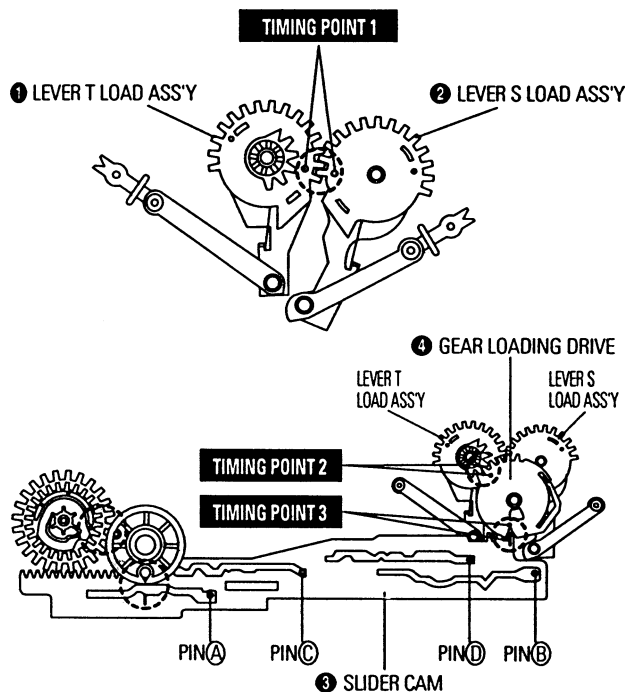


Fig. 25 - Assembly of Gear Loading Drive, Slider Cam, Lever T, S Load Assembly

Lever Tension Assembly, Band Brake Assembly, Sleeve Tension Removal

1. Remove the Spring Tension (1).
2. In bottom side of Deck, remove the Sleeve Tension (2) after rotating it right or left while lifting locking edge of Sleeve Tension.
3. Remove the side "a" of the Band Brake Assembly (4) in the direction of arrow "A" from the Lever Tension Assembly (3).
4. Remove the side "b" of the Band Brake Assembly (4) in the direction of arrow "B" from the Main Base.

Note: When replacing the Lever Tension Assembly, be sure to apply oil in the Sleeve Tension. Take care not to touch or soil the felt side, and not to be fold or damage the Band Brake Assembly.

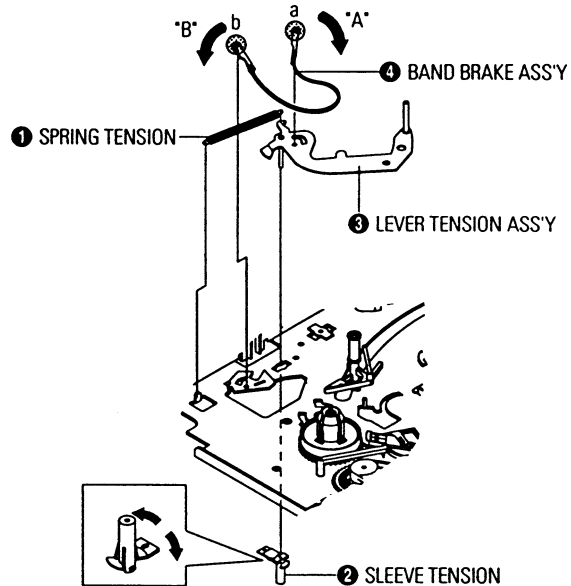


Fig. 26 - Lever Tension Assembly, Band Brake Assembly, Sleeve Tension Removal

VRD100/VRD120HF MECHANISM DISASSEMBLY

Lever S, T Brake Assembly Removal

1. Release the Hook (A) and the Hook (B), (C) in the direction of arrow as shown in Fig. 27.
2. Lift the Lever S, T Brake Assembly (1), (2) with Spring Brake (3).

Assembly:

1. Assemble the Lever S Brake Assembly (1) on the Main Base.
2. Assemble the Lever T Brake Assembly (2) with Spring Brake (3).

Note: Take extreme care not to deform the Spring Brake during removal and installation.

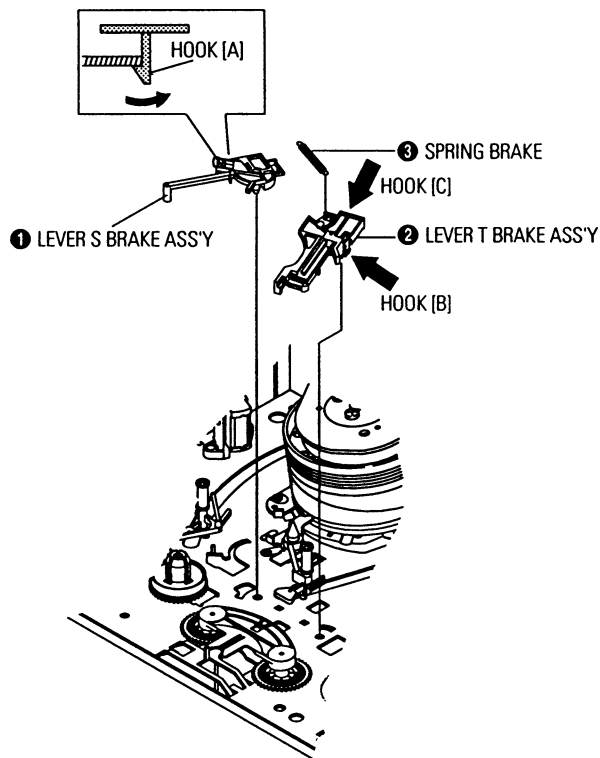


Fig. 27 - Lever S, T Brake Assembly Removal



Lever Idle Assembly Removal

1. Push the Lever Idle (1) in the direction of arrow "A", "B".
2. Lift the Lever Idle (1).

Assembly:

1. Apply oil in two (2) Bosses of Lever Idle (1).
2. Assemble the Gear Idle (2) with the Lever Idle (1).

Note: When replacing the Gear Idle (2), be sure to add oil in the boss of Lever Idle (1).

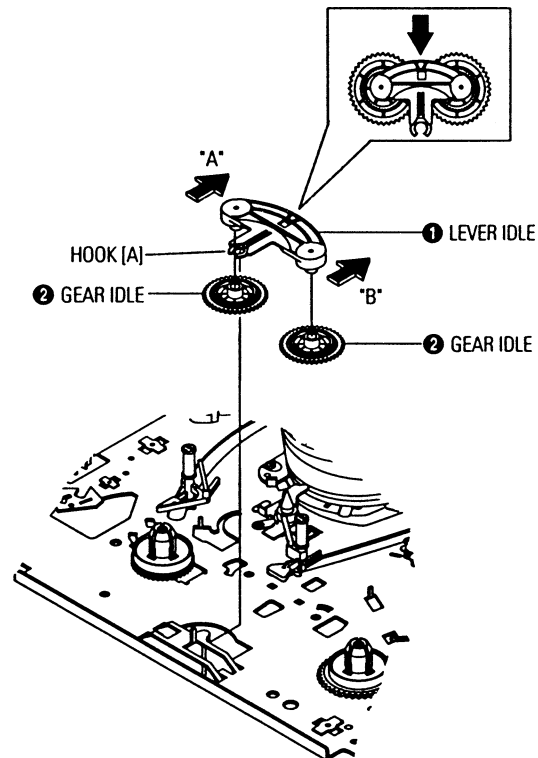


Fig. 28 - Lever Idle Assembly Removal



VRD100/VRD120HF MECHANISM DISASSEMBLY

Disk S, T Reel Removal

1. Lift the Disk S, T Reel (1), (2).

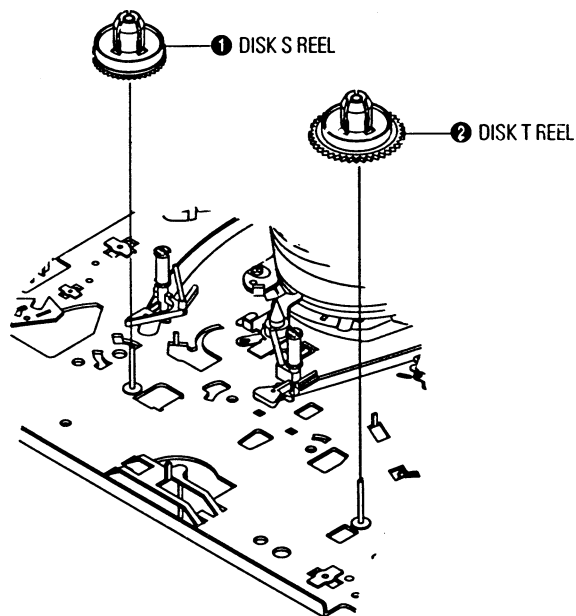


Fig. 29 - Disk S, T Reel Removal



Holder Clutch Assembly Removal

1. Remove the Washer Slit (1).
2. Lift the Holder Clutch Assembly (2).

Not: When you reinstall Holder Clutch Assembly (2), Check the condition of spring as shown in detail A.
Don't push Holder Clutch Assembly down with excessive force. Just insert Holder Clutch Assembly into post center with dead force and rotate it smoothly. Be sure to confirm that spring is in the slit of Gear Center Assembly as shown in detail B.

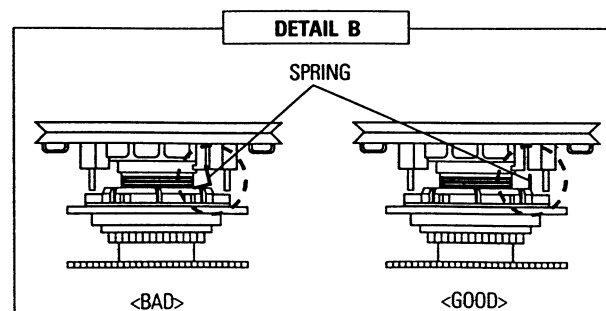
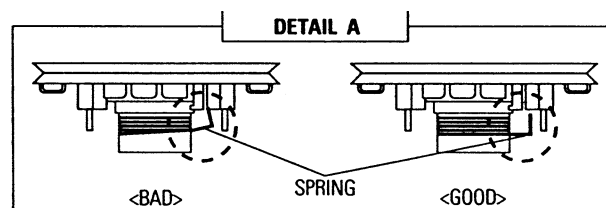
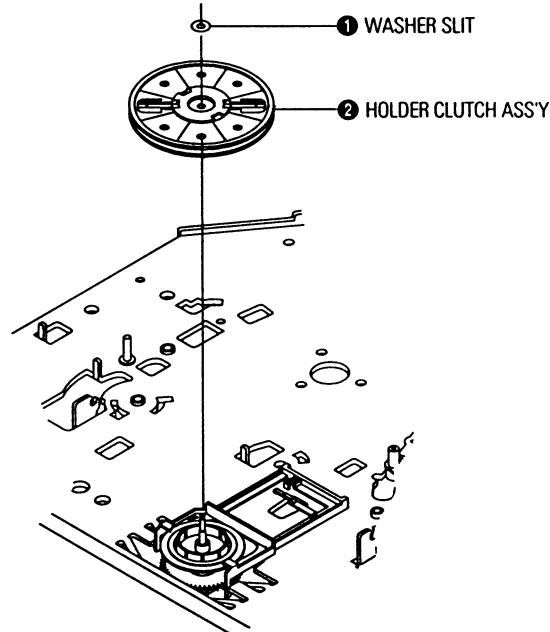


Fig. 30 - Holder Clutch Assembly Removal



VRD100/VRD120HF

MECHANISM DISASSEMBLY

Lever Up Down Assembly, Gear Center Assembly Removal

1. Remove the two (2) hooks in the direction of arrow as shown in Fig. 31 and lift the Lever Up Down Assembly (1).
2. Lift the Gear Center Assembly (2).

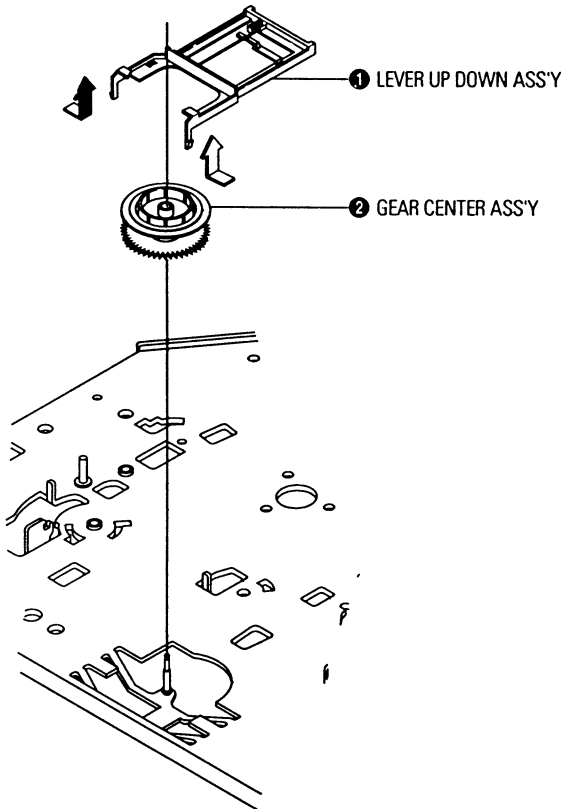


Fig. 31 - Lever Up Down Assembly, Gear Center Assembly Removal



Assembly of Lever Up Down Assembly, Gear Center Assembly

1. Insert the Lever Up Down Assembly (1) in the two (2) rectangular holes on Main Base.
2. Lift the Lever Up Down Assembly (1) about 35 degrees. (Refer to Fig. 32).
3. Insert Ring (4) of the Gear Center Assembly (2) in the Guide (5) of the Lever Up Down Assembly (1).
4. Insert the Gear Center Assembly (2) in the post (6) on Main Base.
5. Push down the Lever Up Down Assembly (1) for locking of the Hook (7).

Note: Take care not to separate and loose the Spring Up Down.
Be sure to confirm that Ring (4) of the Gear Center Assembly (3) is in the Guide (5) of the Lever Up Down Assembly (1) after finishing assembly of Lever Up Down Assembly and Gear Center Assembly.

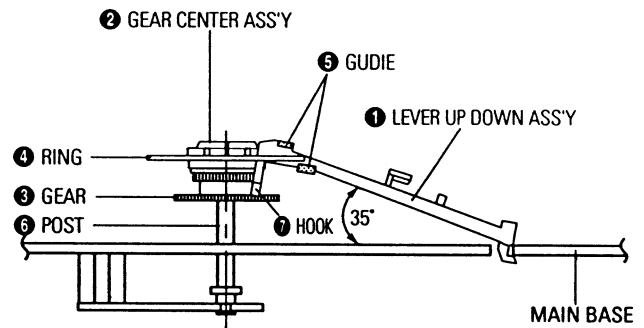


Fig. 32 - Assembly of Lever Up Down Assembly, Gear Center Assembly



VRD100/VRD120HF MECHANISM DISASSEMBLY

Guide Cassette Door Removal

1. Lift the Hook (A).
2. Rotate the Guide Cassette Door (1) in the direction of arrow.

Note: After reinstalling the Guide Cassette Door (1) secure the Hook (A).

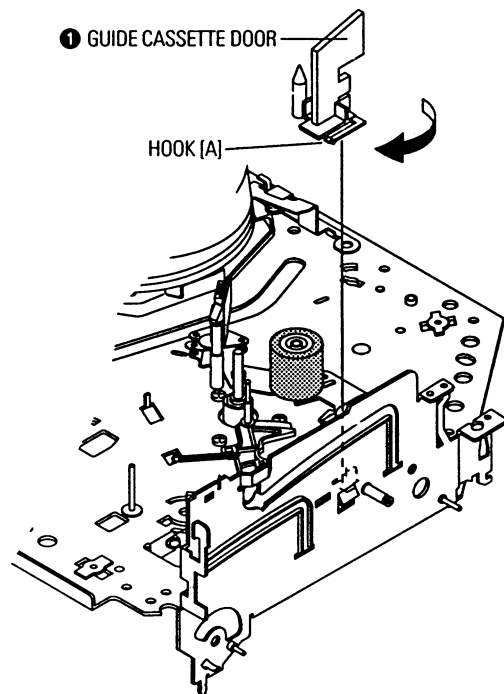


Fig. 33 - Guide Cassette Door Removal

Unit Pinch Assembly, Plate Joint, Spring Pinch Drive Removal

1. Lift the Unit Pinch Assembly (1).
2. Remove the Plate Joint (2) from Lever Pinch Drive.
3. Remove the Spring Pinch drive (3).

Note: Take extreme care not to get grease on the Roller Pinch.

When reinstalling, be sure to apply grease on the post pinch roller.

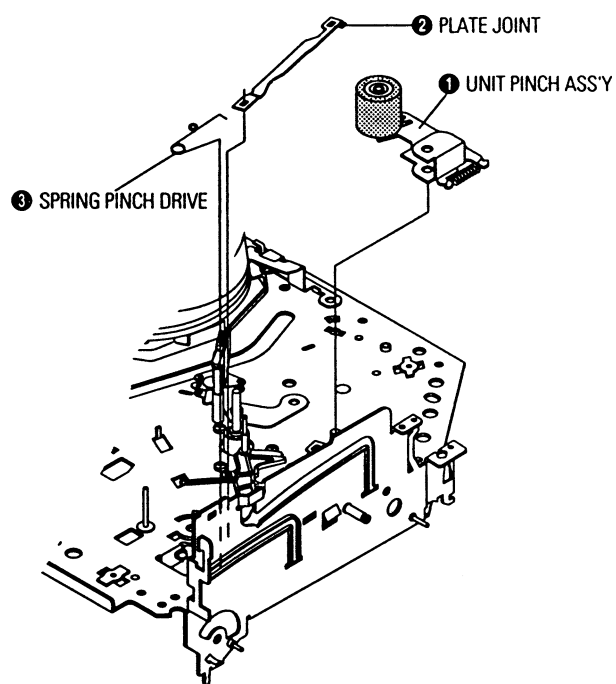


Fig. 34 - Unit Pinch Assembly, Plate Joint, Spring Pinch Drive Removal

VRD100/VRD120HF

MECHANISM DISASSEMBLY

Lever #9 Guide Assembly Removal

1. Remove the Spring #9 Guide (1).
2. Lift the Lever #9 Guide Assembly (2) in the direction of arrow.

Note: Take extreme care not to get grease on the Tape Guide Post.
After reinstalling, check the bottom side of the Post #9 Guide to stick to the top side of Main Base.

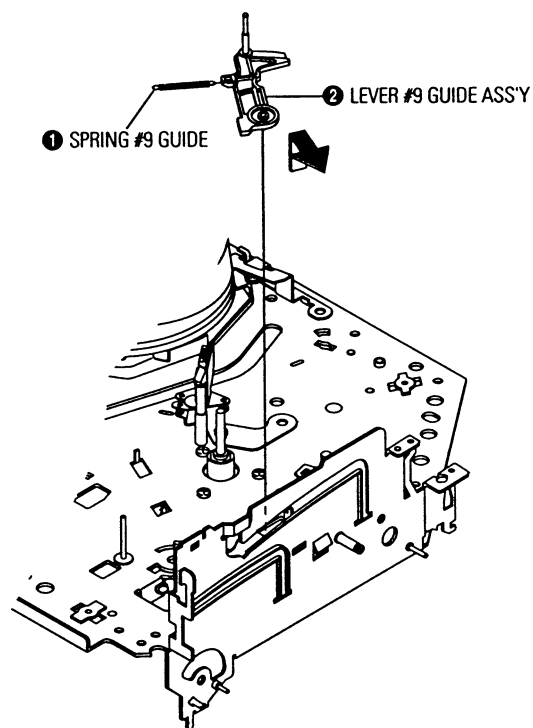


Fig. 35 - Lever #9 Guide Assembly Removal



FE Head Removal

1. Remove the screw (1).
2. Lift the FE Head (2).

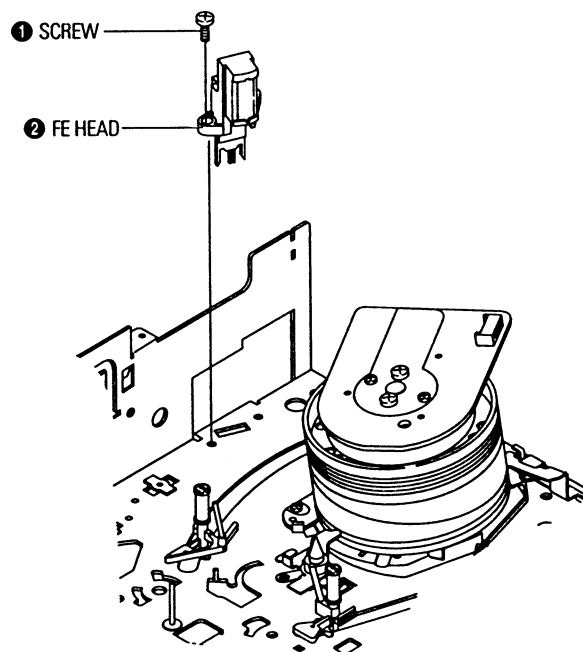


Fig. 36 - FE Head Removal



VRD100/VRD120HF MECHANISM DISASSEMBLY

ACE Head Removal

1. Pull out the FPC from connector of ACE Head Assembly (2).
2. Remove the screw (1).
3. Lift the ACE Head Assembly (2).

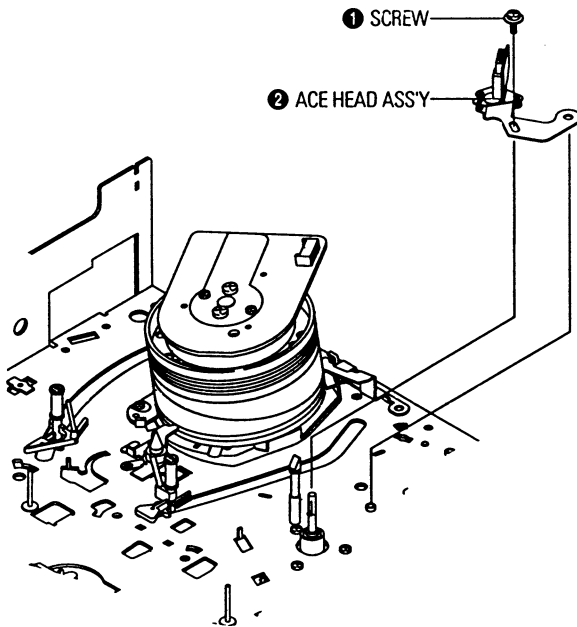


Fig. 37 - ACE Head Removal

Slider S, T Assembly Removal

1. Move the Slider S, T Assembly (1), (2) to slot, and then lift it to remove. (Refer to arrow).

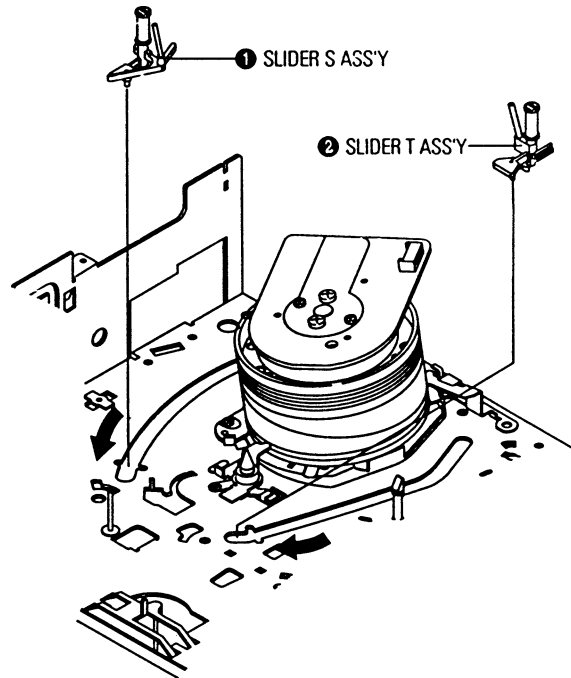


Fig. 38 - Slider S, T Assembly Removal

VRD100/VRD120HF

MECHANISM DISASSEMBLY

Cylinder Assembly Removal

1. Remove the three (3) Screws (1), (3), (5).
2. Remove the Plate Cylinder A, B, C (2), (4), (6) in the direction of arrow.
3. Lift the Cylinder Assembly (7).

Note:

- When reinstalling, push the Plate Cylinder, A, B (4), (6) in the reverse of arrow and then, tighten the two (2) Screws (3), (5).
- Take care not to touch the Cylinder Assembly and the Tape Guide Post at reinstalling Plate Cylinder C (2).
- Take care not to touch the Cylinder Assembly with screwdriver at reinstalling the Plate Cylinder C (2).

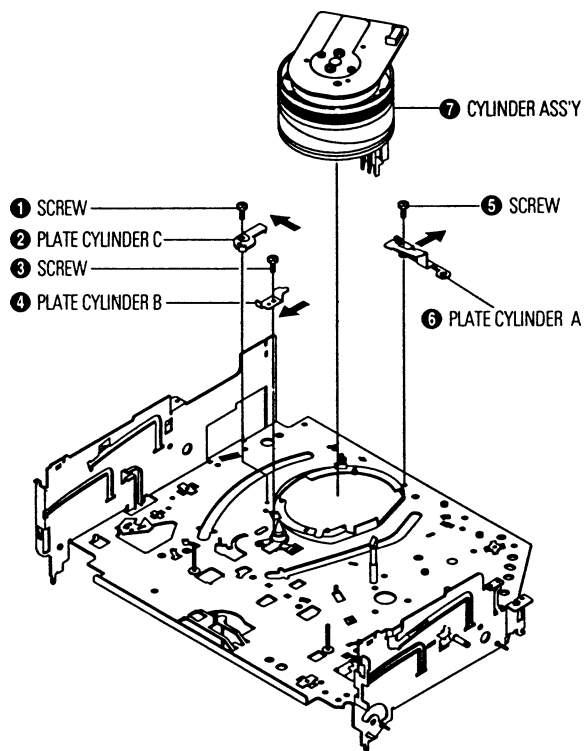


Fig. 39 - Cylinder Assembly Removal



Belt Pulley Removal

1. Remove the Belt Pulley (1).

Note: Take extreme care not to get grease on Belt Pulley (1) at assembling or reassembling.

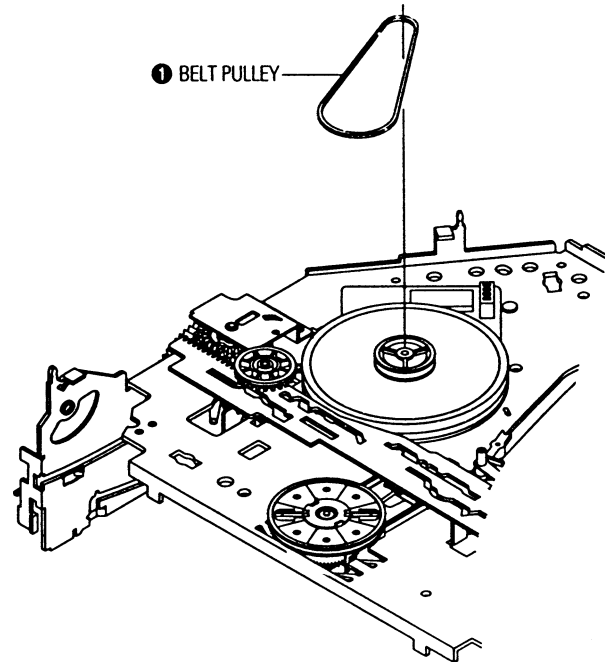


Fig. 40 - Belt Pulley Removal

Lever Head Cleaner Assembly Removal

1. Release the Hook (1).
2. Lift the Lever Head Cleaner Assembly (2).

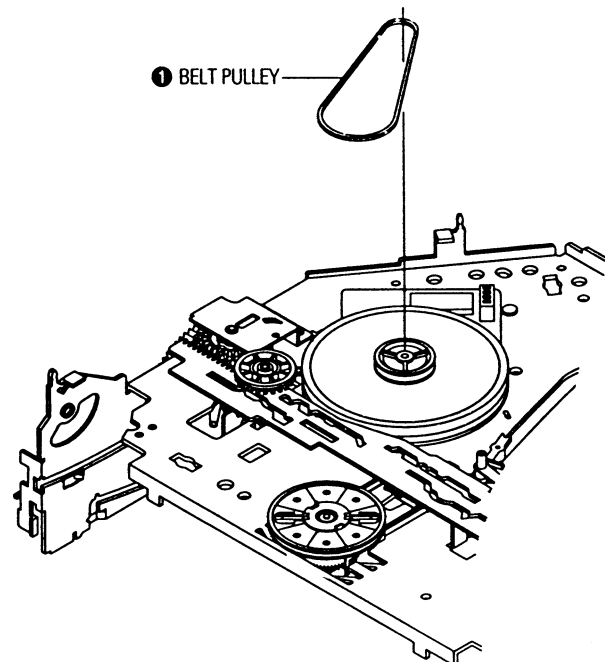


Fig. 41 - Lever Head Cleaner Assembly Removal



VRD100/VRD120HF MECHANISM DISASSEMBLY

Motor Capstan Assembly Removal

1. Remove the three (3) Screws (1).
2. Remove the Motor Capstan Assembly (2).

Assembly:

1. Match the three (3) holes of Motor Capstan Assembly (2) to the three (3) holes of Main Base. Be careful not to drop or knock the Motor Capstan Assembly.
2. Tighten the three (3) Screws in the direction of arrow as shown in detail drawing.

Note:

- Don't reuse the removed screws from Motor Capstan Assembly.
- After tightening screws, check if there is gap between the head of screws and the top side of Main Base. There should be no gap between the head of screws and the top side of Main Base.
- After reinstalling, adjust the Tape Transport System again.

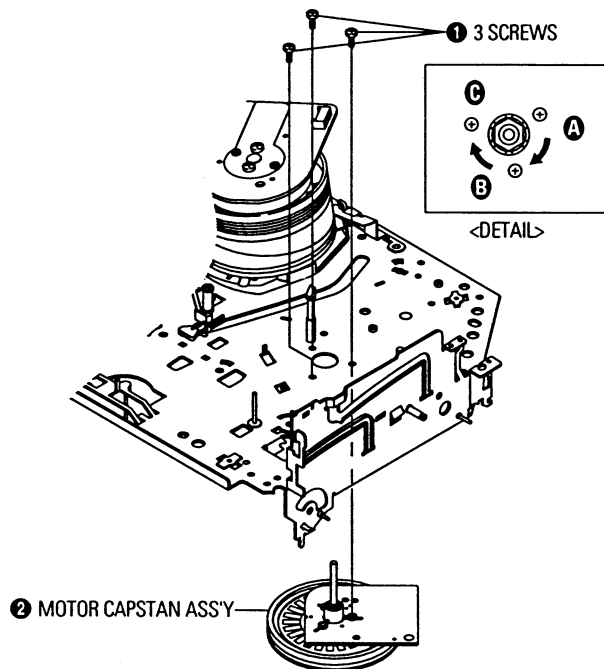


Fig. 42 - Motor Capstan Assembly Removal



How to Eject the Cassette Tape

(If the unit does not operate on condition that is inserted into housing assembly).

1. Remove the Holder Worm (1) and the Gear Worm (2).
2. Turn the Gear Worm Wheel (3) counterclockwise with screwdriver. (Refer to arrow).
3. When Slider S, T are approached in the position of unloading, rotate Holder Clutch counterclockwise after inserting screwdriver in the hole of frame's bottom in order to wind the unwound tape. (Refer to Fig. 44). (If you rotate Gear Worm Wheel continuously when tape is in state of unwinding, you may cause a tape contamination by grease and tape damage. Be sure to wind the unwound tape in the state of set horizontally.)
4. Rotate Gear Worm Wheel (3) counterclockwise using screwdriver again up to the state of eject mode and then pick out the tape. (Refer to Fig. 43).

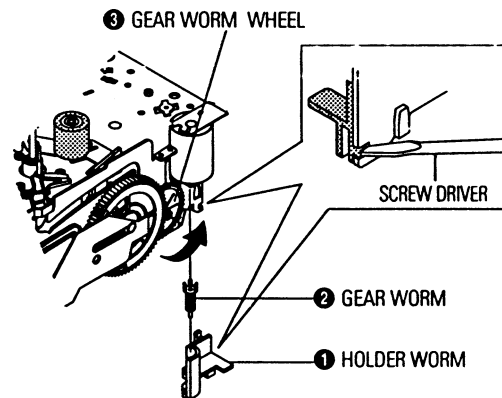


Fig. 43 - How To Eject a Cassette Tape

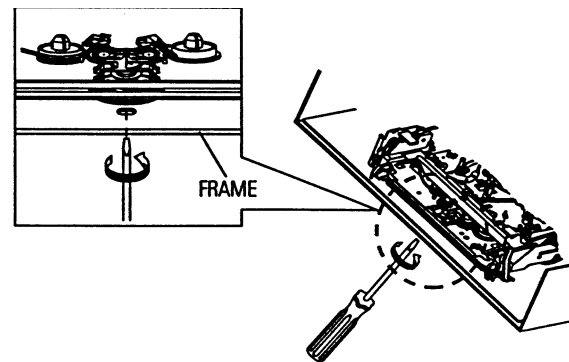


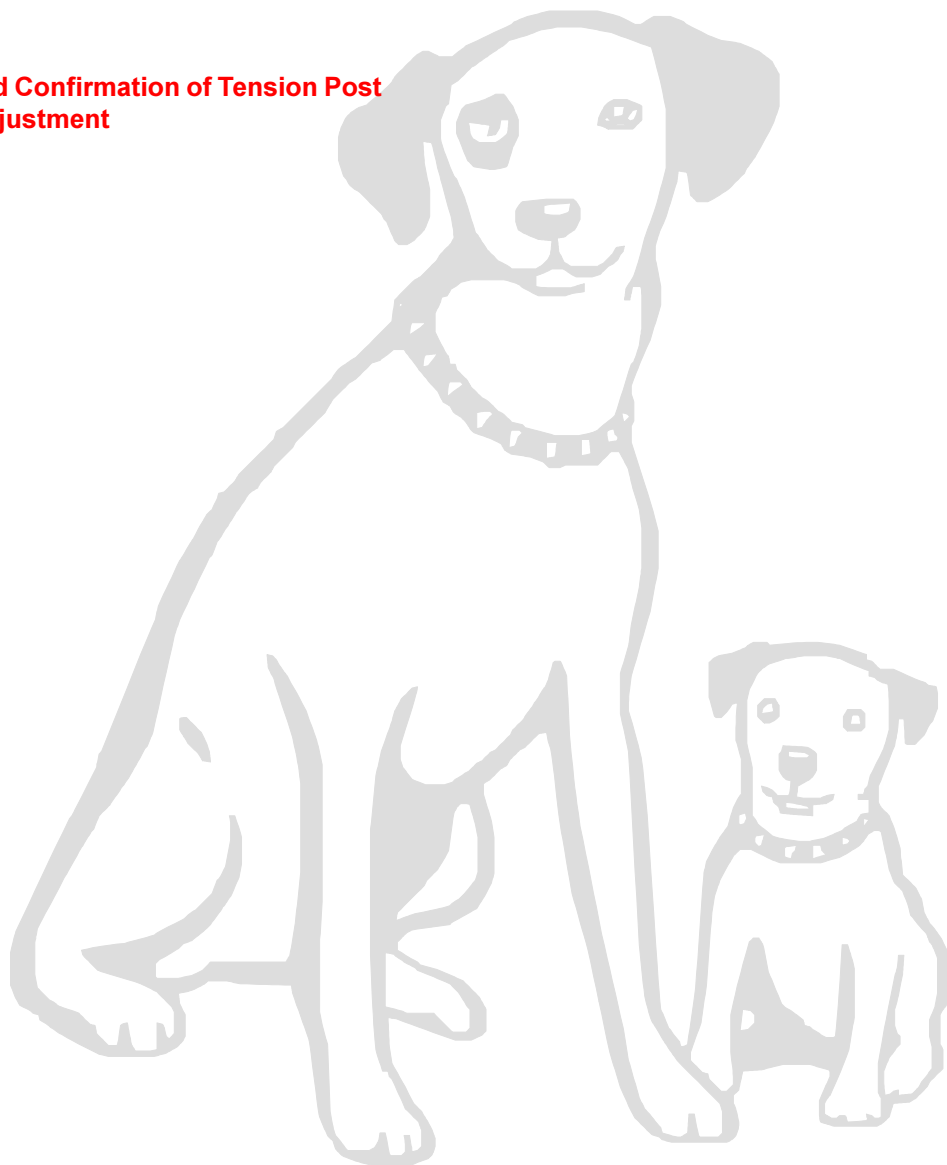
Fig. 44 - Gear Worm Wheel Counterclockwise Rotation for Cassette Ejection



ADJUSTMENTS/ALIGNMENTS SUBINDEX

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ACE Head Tilt Adjustment
Audio Azimuth Adjustment
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Envelope Check
Tape Wrinkle Check
Reel Torque
Location, Adjustment and Confirmation of Tension Post
Head Switching Point Adjustment
NVRAM Option Setting



VRD100/VRD120HF

ADJUSTMENTS/ALIGNMENTS

References

1. X-Point (Tracking center) adjustment, "Head switching adjustment" and "NVRAM option setting" can be adjusted with remote control.
2. When replacing the Main B PCB Microm (IC6201) and NVRAM (IC6203; EEPROM) be sure to adjust the "Head switching adjustment" and "NVRAM option setting."
3. When replacing the cylinder assembly, be sure to adjust the "X-Point" and "Head switching adjustment."
4. How to adjust.
 - Intermittently short-circuit the test point on Function-timer PCB with pincers to set the adjustment mode.
 - If the corresponding adjustment button is pressed, the adjustment is performed automatically.
 - If the adjustment is completed, be sure to turn the Power Off.

Location of Adjustment Button of Remote Control

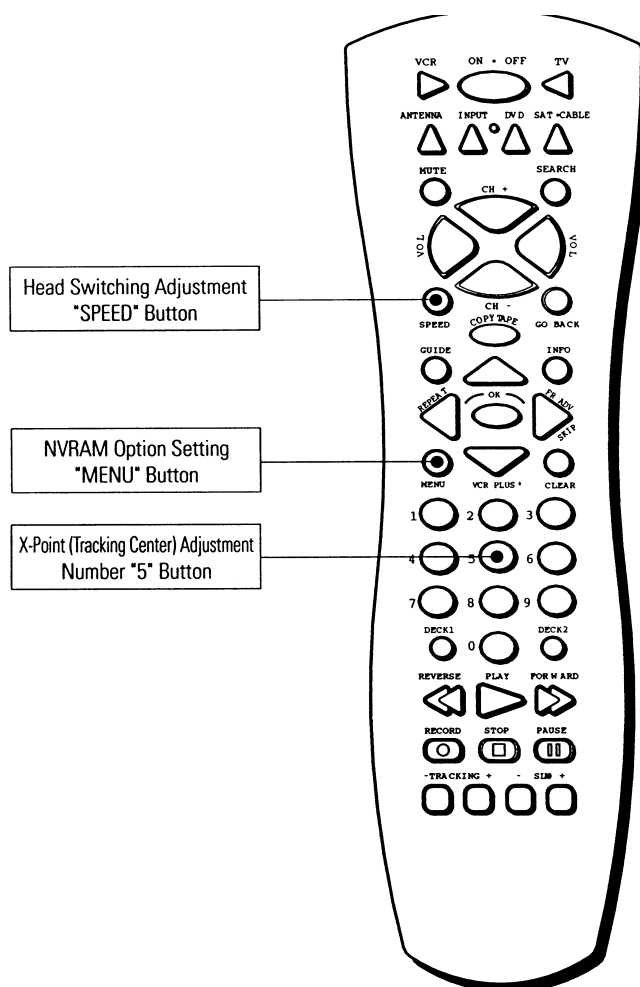


Fig. 1 Location of Adjustment Button of Remote Control

VRD100/VRD120HF ADJUSTMENTS/ALIGNMENTS



Test Point Location for Adjustment Mode Setting

Application Model: VRD120HF

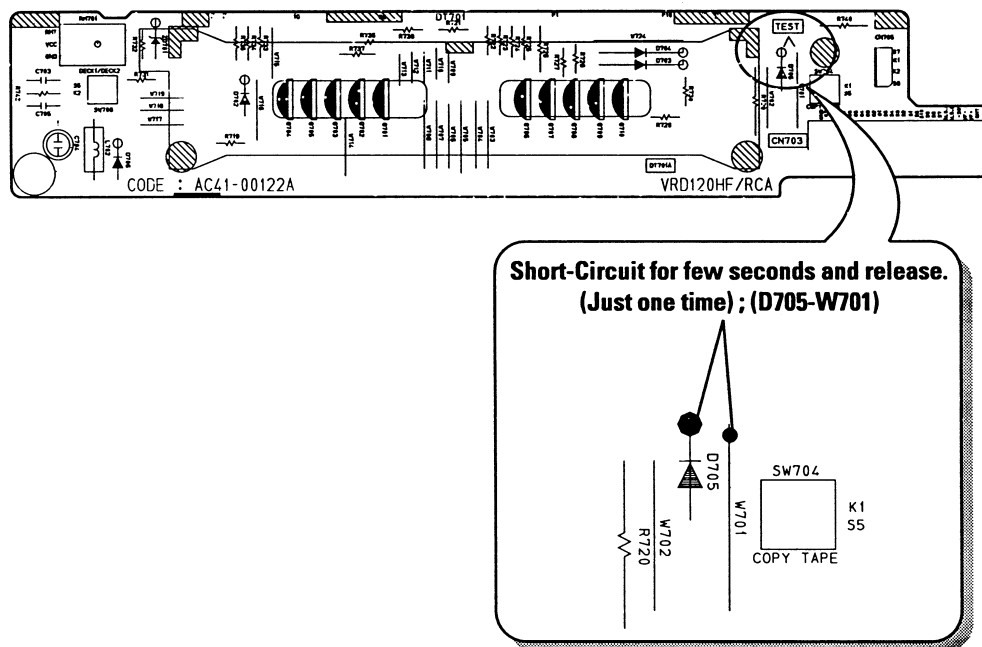


Fig. 2 Function-Timer PCB (Top View)

Application Model: VRD100

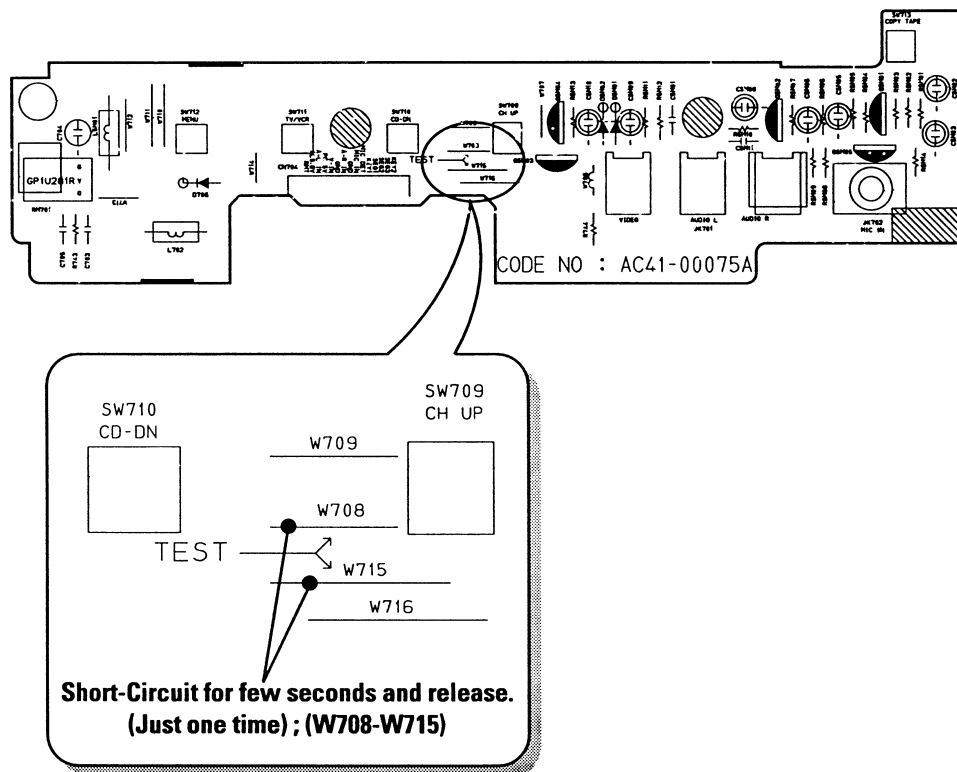


Fig. 3 Function-Timer PCB (Top View)



VRD100/VRD120HF

ADJUSTMENTS/ALIGNMENTS



Tape Transport System and Adjustment Locations

The Tape Transport System has been adjusted precisely in the factory. Alignment is not necessary except for the following:

1. Noise observed on the screen.
2. Tape damage.
3. Parts replacement in the Tape Transport System.

Lower flange height of tape guide is used as the reference for the transport adjustment. To maintain the height of the tape guide and prevent damage, do not apply excessive force onto the main base.

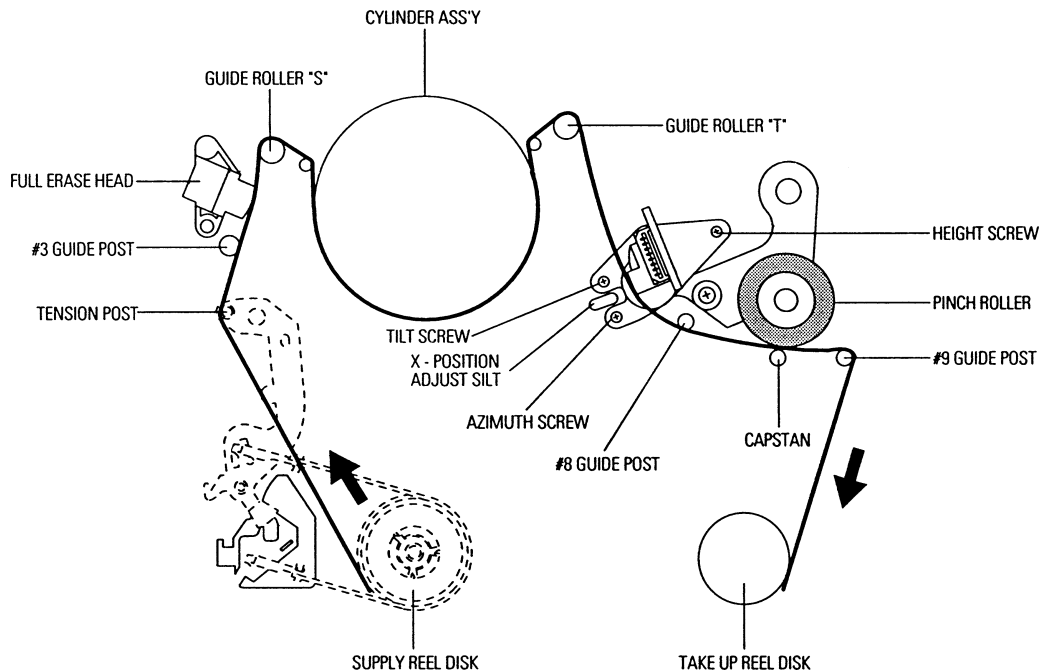


Fig. 4 Location of Tape Transport Adjustment

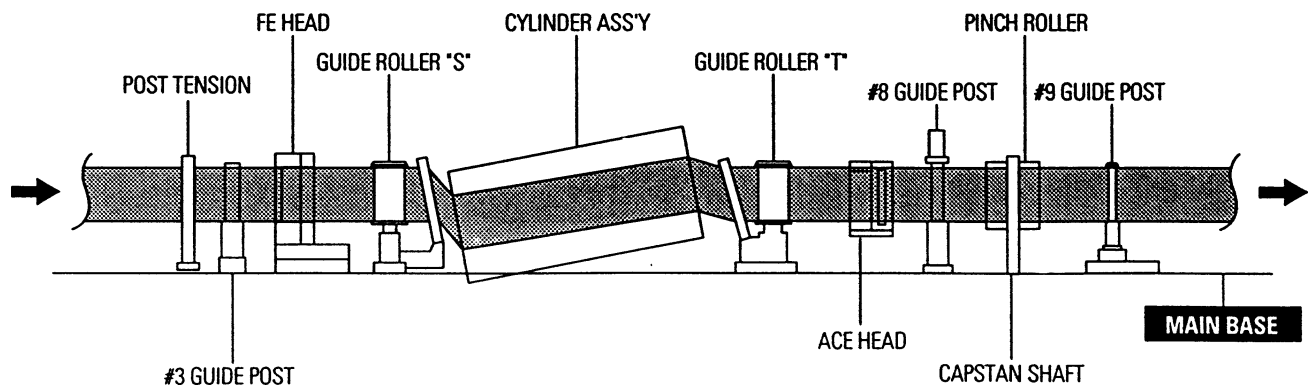


Fig. 5 Tape Travel Diagram



VRD100/VRD120HF

ADJUSTMENTS/ALIGNMENTS



Tape Transport System and Adjustment

When parts are replaced, perform the required adjustments by referring to procedures for the Tape Transport System. If there are any changes to the tape path, first run a T-120 tape and make sure excessive tape wrinkle does not occur at the tape guides.

1. If tape wrinkle is observed at the Guide Roller S, T, turn the Guide Roller S, T until wrinkle disappears.
2. If the tape wrinkle is still observed at the tape guide, perform the tilt adjustment of the ACE head.

ACE Head Assembly Adjustment

Test Point: TP3101 (Envelope)
TP6101 (Control Pulse)
TP6102 (H'D S/W - Trigger)

Test Point: TP801 (Envelope)
TP802 (H'D S/W - Trigger)
TP2003 (Control Pulse)

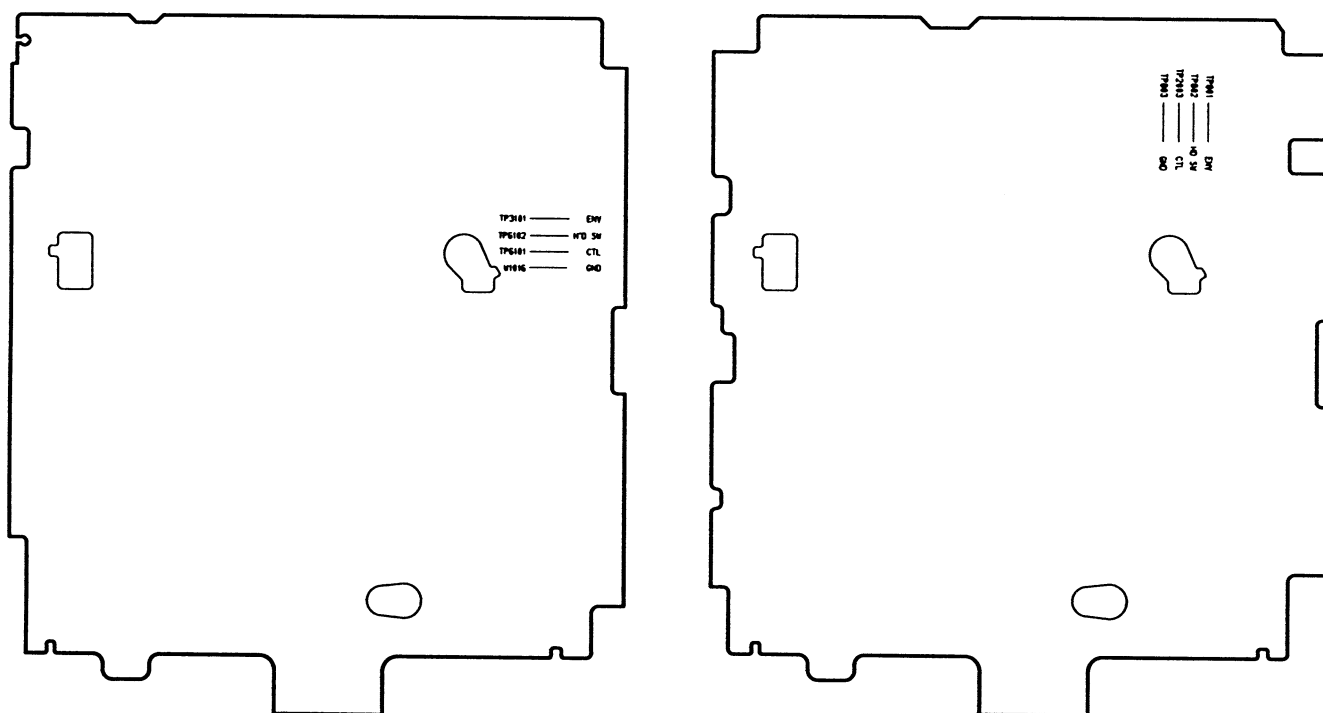


Fig. 6 Location of Test Point (Main PCB-Top View)



VRD100/VRD120HF

ADJUSTMENTS/ALIGNMENTS

ACE Head Assembly Adjustment (Continued)

ACE Head Height Adjustment

1. Run the alignment tape (Color bar) in the playback mode.
2. Observe surface of the audio head using a dental mirror.
3. Turn screw (C) clockwise or counterclockwise until the gap of lower tape edge and the lower edge of the control head is about 0.25 mm. (Refer to figures 7 and 8).

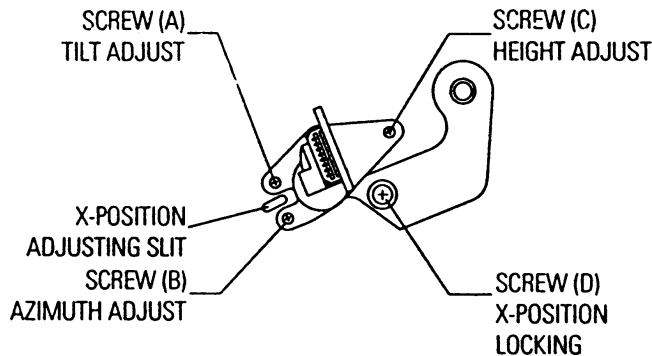


Fig. 7 Location of ACE Head Adjustment Screw

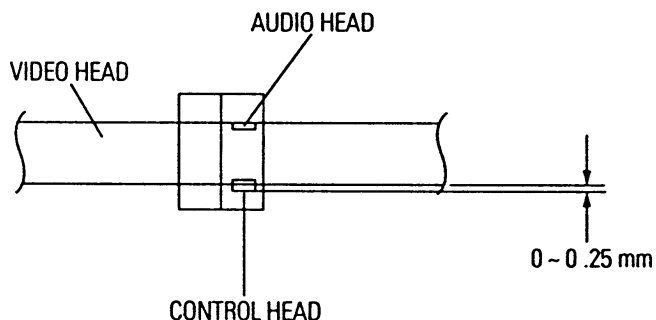


Fig. 8 ACE Head Height Adjustment



ACE Head Tilt Adjustment

1. Playback a blank tape and observe the position of the tape at the lower flange of tape guide.
2. Confirm that there is no curl or wrinkle at the lower flange of tape guide as shown in figure 9 (B).
3. If a curl or wrinkle of the tape occurs, slightly turn the screw (A) tilt adjust on the ACE Head Assembly.
4. Reconfirm the ACE head height.

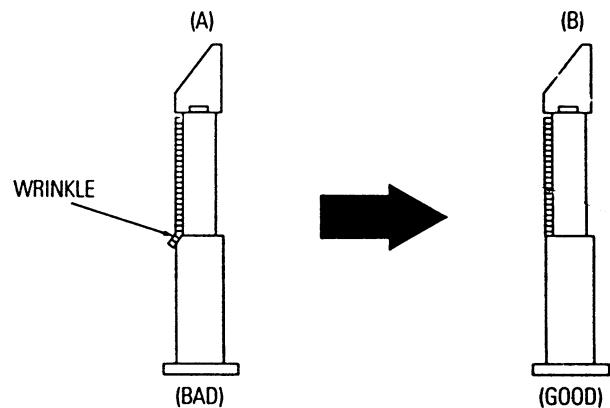


Fig. 9 Tape Guide Check

Audio Azimuth Adjustment

1. Load alignment tape (Mono scope) and playback the 7KHz signal.
2. Connect channel-1 scope probe to audio output test point (TP302).
3. Adjust screw (B) to achieve maximum audio level. (See Fig. 7).

ACE Head Position (X-Point) Adjustment

1. Playback the alignment tape (Color bar).
2. Intermittently short-circuit the two test points on Function-Timer PCB to set the adjustment mode. (See figures 2 and 3).
3. Press the "5" button of remote control then adjustment is operated automatically. (See Fig. 1).
4. Connect the CH-1 probe to "Envelope" the CH-2 probe to "H'D switching pulse" and then trigger to CH-1.
5. Insert the (-) driver into the X-Point adjustment hole and adjust it so that envelope waveform is maximum.



VRD100/VRD120HF

ADJUSTMENTS/ALIGNMENTS



Linearity Adjustment (Guide Roller S, T Adjustment)

1. Playback the monoscope alignment tape (SP mode).
2. Observe the video envelope signal on an oscilloscope (triggered by the video switching pulse).
3. Make sure the video envelope waveform (at its minimum) meets the specification shown in Fig. 10. If it does not, adjust as follows:

Note: a=Maximum output of the video RF envelope.
b=Minimum output of the video RF envelope at the entrance side.
c=Minimum output of the video RF envelope at the center point.
d=Maximum output of the video RF envelope at the exit side.

4. If the section A in Fig. 11 does not meet the specification, adjust the Guide Roller S up or down.
5. If the section B in Fig. 11 does not meet the specification, adjust the Guide Roller T up or down.
6. Play back the Mono Scope alignment tape (SP mode.)
7. Connect an oscilloscope Ch-1 to the Envelope and Ch-2 to the H'D SW Pulse for triggering.
8. Turn the Guide Roller heads with a flat head driver to obtain a flat video RF envelope as shown in Fig. 12.

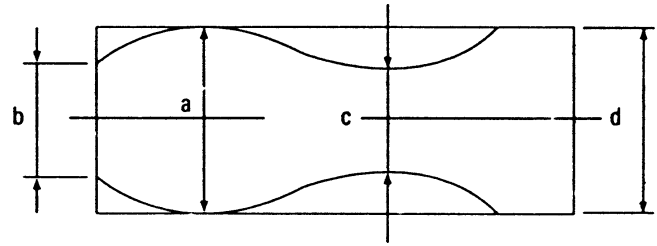


Fig. 10 Envelope Waveform Adjustment

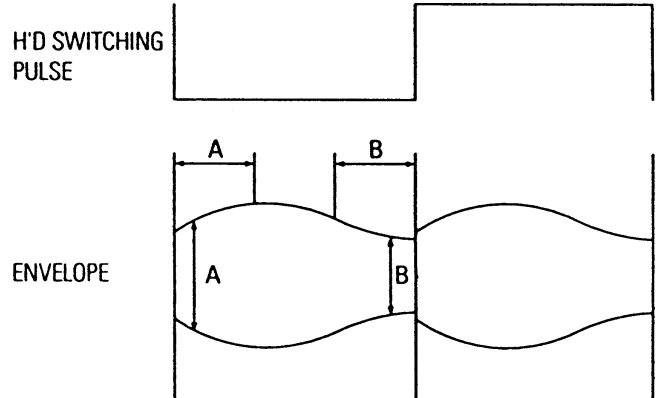


Fig. 11 Adjustment Points

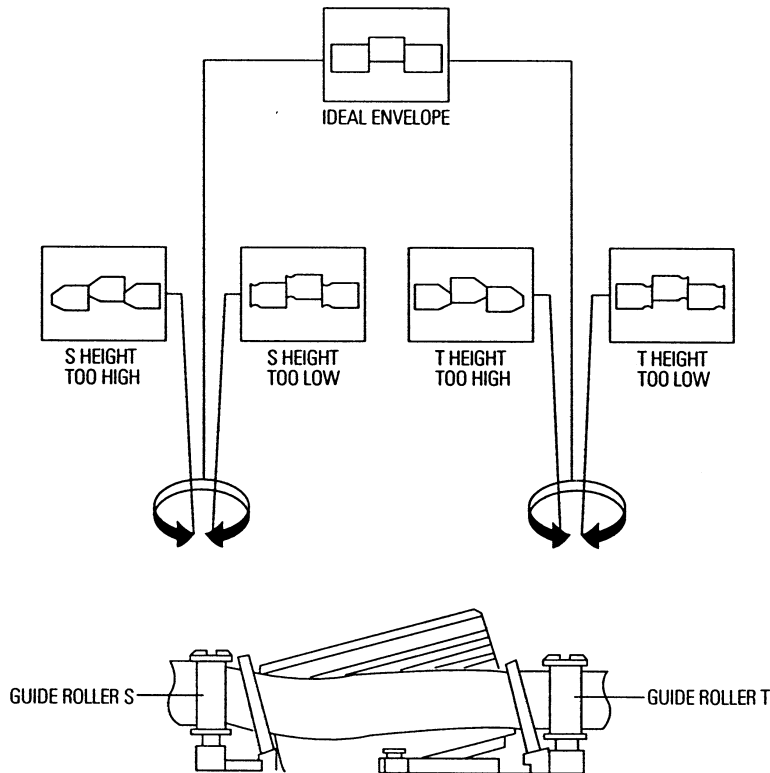


Fig. 12 Guide Roller S, T Height Adjustment



VRD100/VRD120HF

ADJUSTMENTS/ALIGNMENTS

Check Transitional Operation from RPS to Play

Check transition from RPS mode to play mode: Using a prerecorded SP tape, make sure the entry side of envelope comes to an appropriate steady state within 3 seconds (as shown in Fig. 13). If the envelope waveform does not reach specified peak-to-peak amplitude within 3 seconds, adjust as follows:

1. Make sure there is no gap between the Supply Roller lower flange and the tape. If there is a gap, adjust the Supply Guide Roller again.
2. Change operation mode from the RPS to the play mode (again and make sure the entry side of envelope rises within 3 seconds).

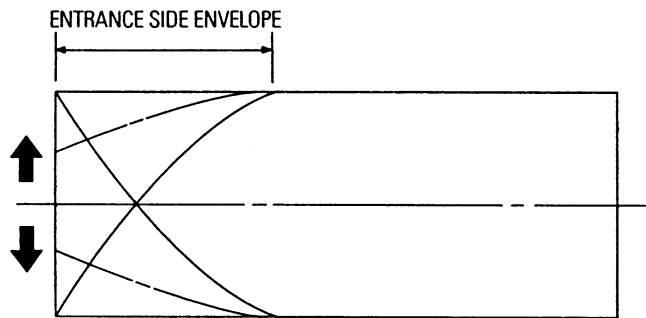


Fig. 13 Video Envelope Rising when Operation Mode Changes from RPS to Play Mode

Envelope Check

1. Make recordings on T-120 (E-120) and T-160 (E-180) tape. Make sure the playback output envelope meets the specification as shown in Fig. 14.
2. Play back a self recorded tape (recording made on the unit using with T-120 (E-120)). The video envelope should meet the specification as shown in Fig. 14. In SP mode, (A) should equal (B). If the head gap is wide, upper cylinder should be checked.

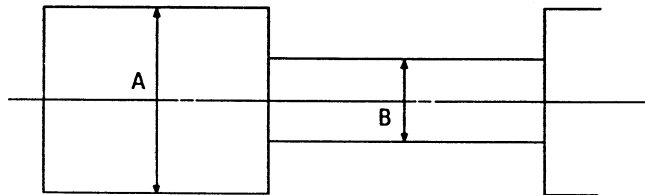


Fig. 14 Envelope Output and Output Level



Tape Wrinkle Check

1. Run the T-160 (E-180) tape in the playback, FPS, RPS and Pause modes and observe tape wrinkle at each guide.
2. If excessive tape wrinkle is observed, perform the following adjustments in Playback mode:
 - Tape wrinkle at the Guide Roller S, T section:
Linearity adjustment.
 - Tape wrinkle at Tape Guide flange:
ACE Head Assembly coarse adjustment.



VRD100/VRD120HF

ADJUSTMENTS/ALIGNMENTS

Reel Torque

1. The rotation of the Capstan Motor causes the Holder Clutch Assembly to rotate through the belt pulley.
2. The spring wrap PLAY/REV of Holder Clutch Assembly drives the disk reel S, T through gear idle by rotation of Gear Center Assembly.
3. Brake is operated by Slider Cam at FF/REW mode.
4. Transportation of accurate driving force is done by gears. (Gear Center Assembly).

Note: If the spec. does not meet the following specifications, replace the Holder Clutch Assembly and then recheck.

MODE	TORQUE g/cm	GAUGE
PB	82.5 ± 27.5	Cassette Torquemeter
RPS	145 ± 30	

Location, Adjustment and Confirmation of Tension Post

1. Remove the Holder Cassette Assembly and then push the lever FL Arm-R to the direction of loading.
2. Push the lever tension drive (1) in the direction of arrow. (See Fig. 15).
3. Turn the Gear Worm Wheel (2) clockwise so that "Timing Point" of the slider FL drive (3) and gear FL cam (4) can be aligned. (See Fig. 16).

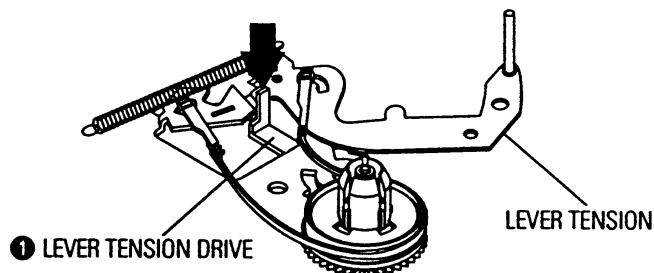


Fig. 15 Location, Adjustment and Confirmation of Tension Post

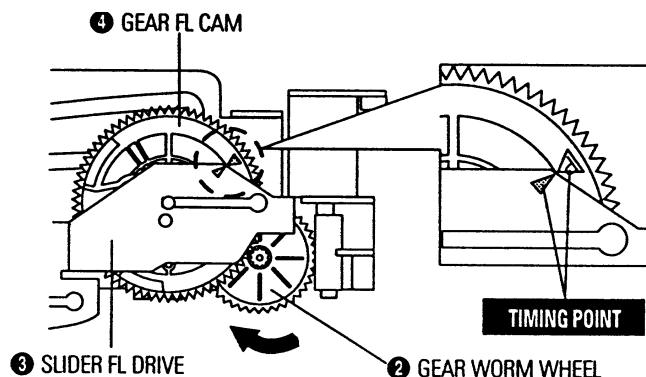


Fig. 16 Timing Point of the Slider FL Drive



4. As rotating Disk S Reel (1) clockwise and the regio of adjusting in the Main Base (i shape of slit) clockwise or counterclockwise after inserting screw driver in the slit on Main Base. Adjust the left end edge of Lever Tension Assembly (3) to $1.3 + 1.5/-0.5$ mm from the location of mark in the Main Base.
5. As rotating Disk S Reel (1), double-check the location of the left end edge of Lever Tension Assembly and the quantity of crossing from mark on Main Base. ($+1.0/-0.5$ mm)

Counterclockwise: Torque UP

Clockwise: Torque DOWN

Back Tension should be 56 ± 15 g.cm at inspecting it with Back Tension Meter.

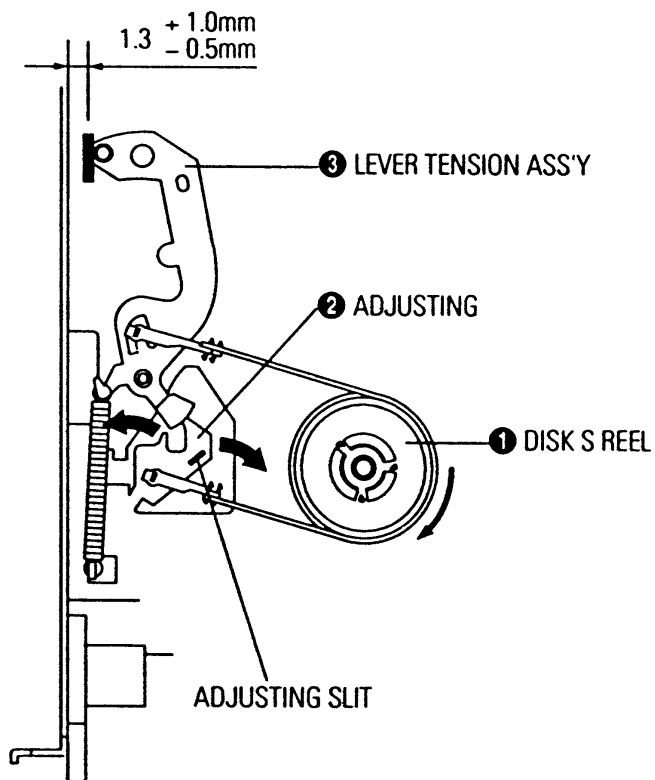


Fig. 17 Tension Pole and Back Tension Adjustment

Note: Mark on Main Base is located in about 1.3mm from inside of bending line.
Be careful not to deform the region of adjusting on Main Base up and down at adjusting.



VRD100/VRD120HF

ADJUSTMENTS/ALIGNMENTS

Head Switching Point Adjustment

1. Playback the alignment tape.
2. Intermittently short circuit the two test points on Function-Timer PCB to set the adjustment mode. (Refer back to figures 2 and 3).
3. Press the "SPEED" button of remote control then adjustment is operated automatically. Refer back to page 2 of this section.

NVRAM Option Setting

NVRAM Option is adjusted at production line basically.

In case Main B PCB Microm (IC6201) and NVRAM (IC6203; EEPROM) is replaced, be sure to set the corresponding option number of the required model. (If the option is not set, the unit is not operated.)

1. Intermittently short-circuit the two test points on Function-Timer PCB to set the adjustment mode. (Refer to figures 2 and 3).
2. Press the "MENU" button on the remote control about 5 seconds then option setting is appeared. (See Fig. 18).
3. Select the option number (Refer to table below) of corresponding model with "FF", "REW" button on the remote control.
4. If selecting the option number is completed, press the "STOP" button of remote control. (If "STOP" button is pressed, the selected number is changed to reversed color; See Fig. 18).
5. Press the "DSP (INFO)" button of remote control again to store the option number. ("PLEASE WAIT" is displayed for a second as shown Fig. 19 and this setting is completed.)

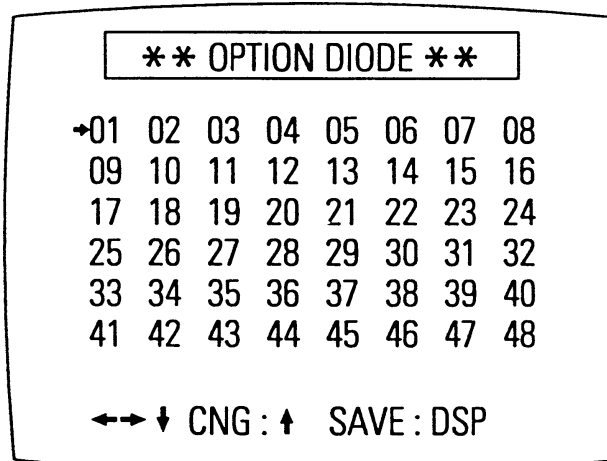


Fig. 18 NVRAM Option Setting

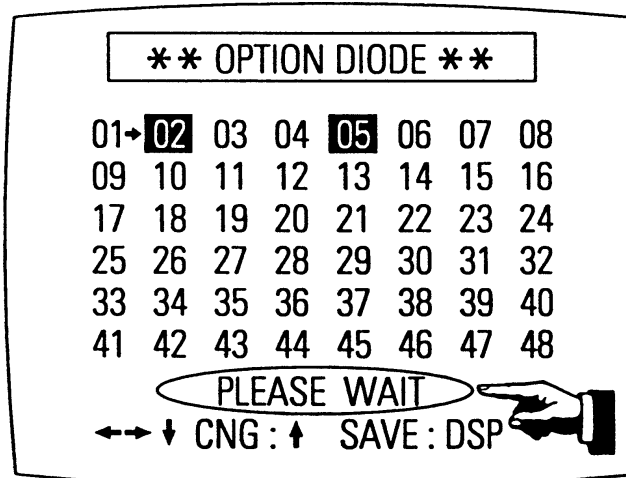


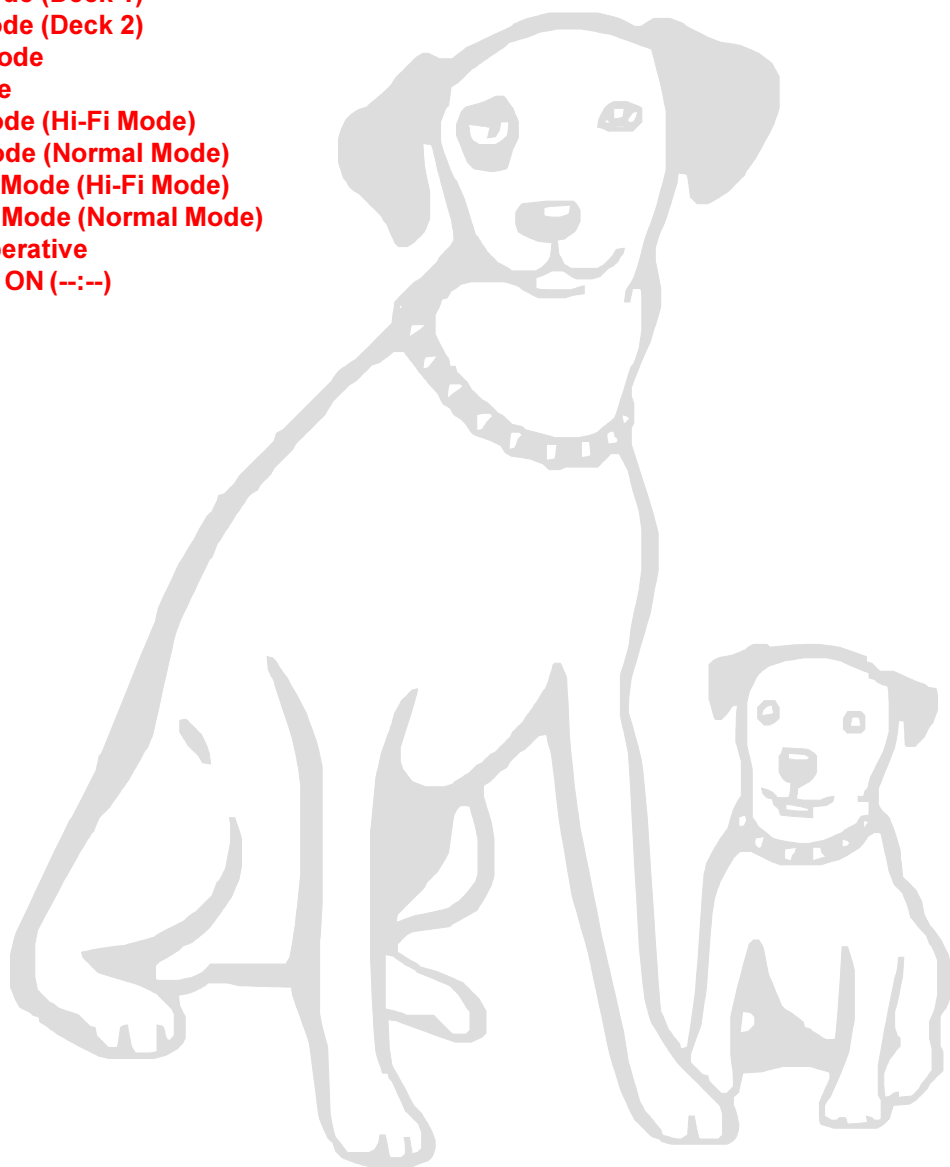
Fig. 19 NVRAM Option Setting

MODELS	OPTION NUMBER
VRD120HF	2, 3, 4, 5, 11, 12, 19, 22, 23, 24, 26, 27, 28
VRD100	3, 4, 5, 11, 12, 19, 22, 23, 24, 26, 27, 28



TROUBLESHOOTING SUBINDEX

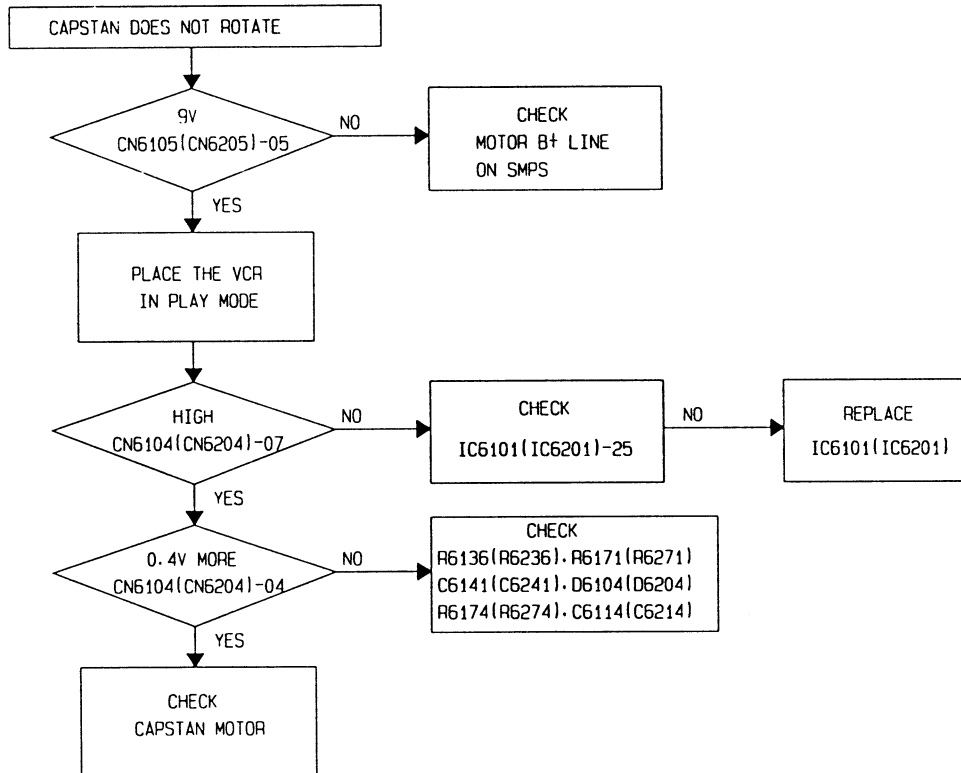
Cassette Does Not Rotate
Drum Does Not Rotate
FWD Search Mode Inoperative
REV Search Mode Inoperative
Fast Forward Mode Inoperative
Rewind Mode Inoperative
Cassette Loading Mechanism Does Not Operate
Check PC Voltage (Push the Power Key)
Mechanism Does Not Operate
Record Mode Inoperative
Video Missing in Record Mode (Deck 1)
Video Missing in Record Mode (Deck 2)
Video Missing in Play Mode (Deck 1)
Video Missing in Play Mode (Deck 2)
Video Missing in Copy Mode
Audio Missing In EE Mode
Audio Missing in Play Mode (Hi-Fi Mode)
Audio Missing in Play Mode (Normal Mode)
Audio Missing in Record Mode (Hi-Fi Mode)
Audio Missing in Record Mode (Normal Mode)
S.M.P.S. Regulation Inoperative
FL Display Does Not Turn ON (--:--)



VRD100/VRD120HF TROUBLESHOOTING GUIDES



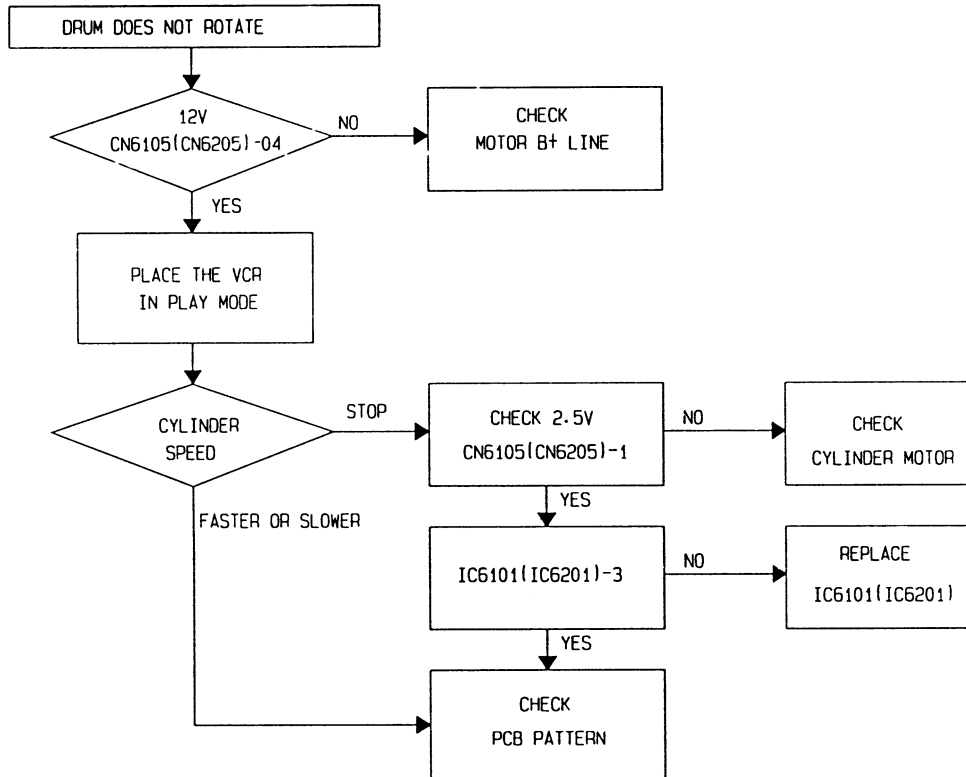
Cassette Does Not Rotate



VRD100/VRD120HF TROUBLESHOOTING GUIDES



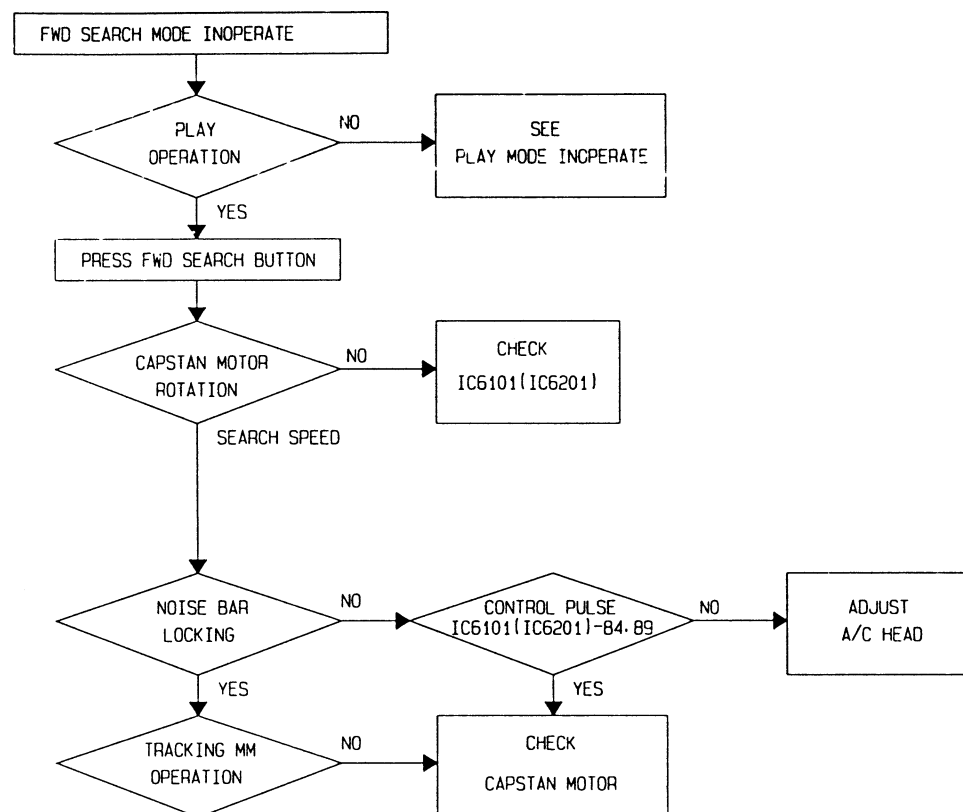
Drum Does Not Rotate



VRD100/VRD120HF TROUBLESHOOTING GUIDES



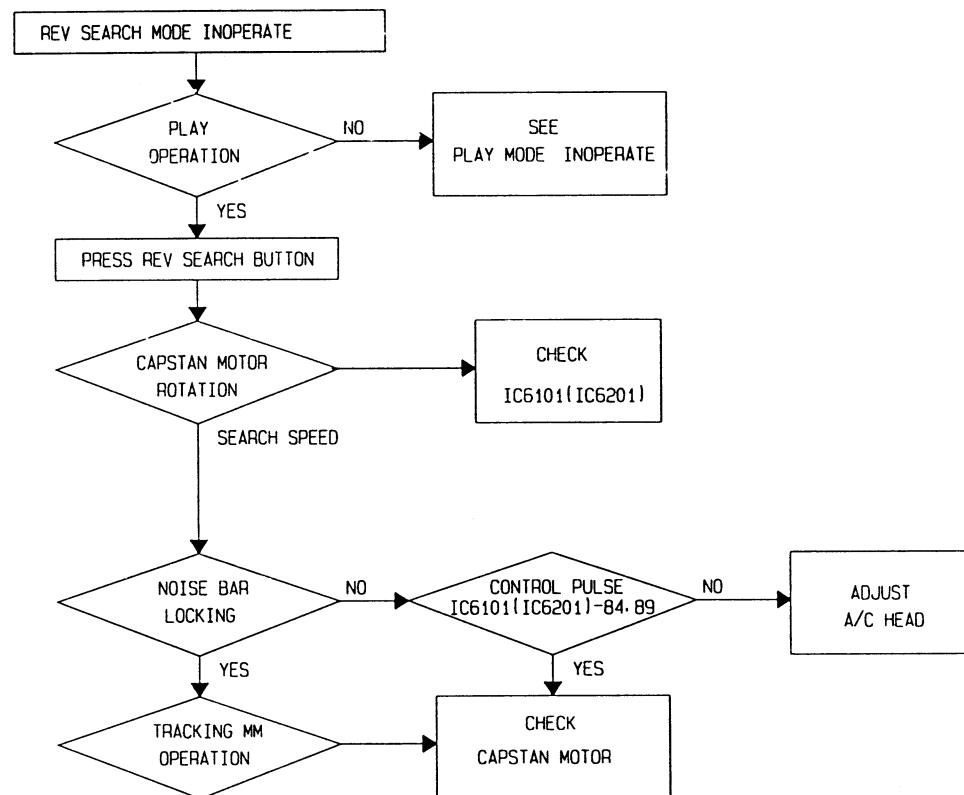
FWD Search Mode Inoperative



VRD100/VRD120HF TROUBLESHOOTING GUIDES



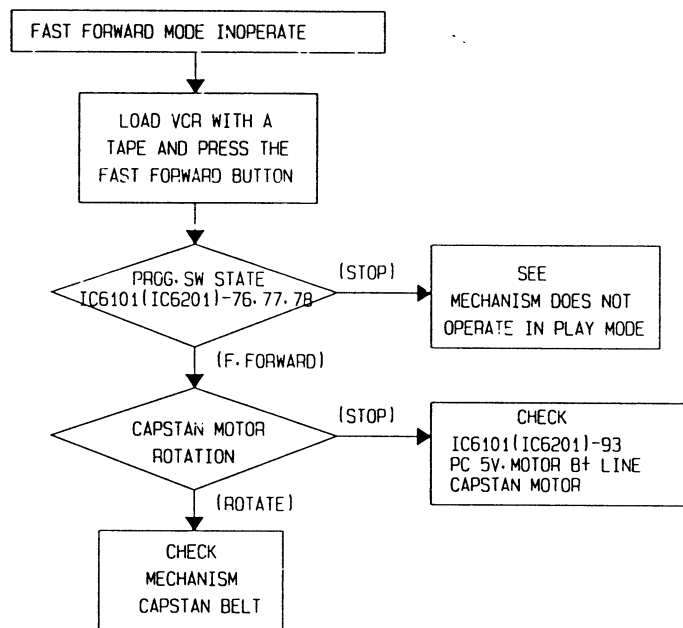
REV Search Mode Inoperative



VRD100/VRD120HF TROUBLESHOOTING GUIDES



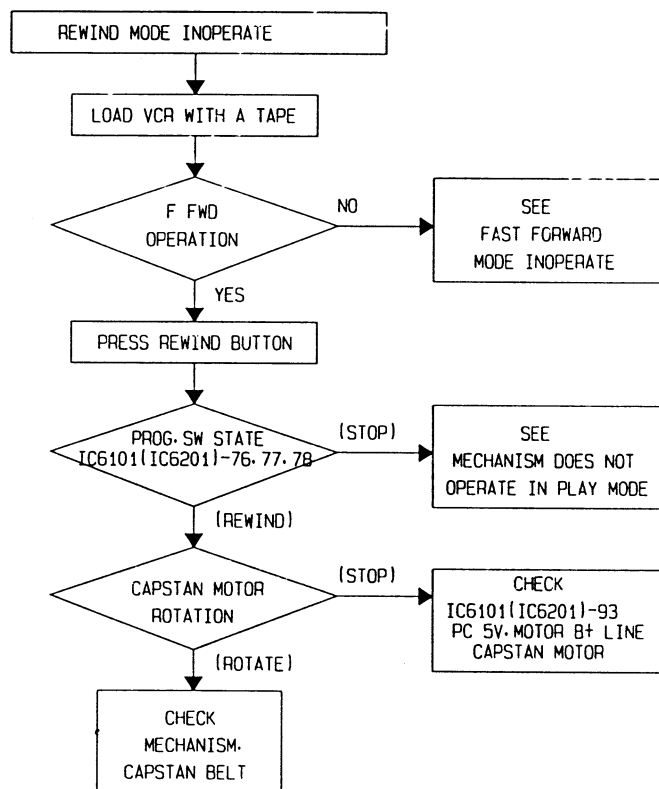
Fast Forward Mode Inoperative



VRD100/VRD120HF TROUBLESHOOTING GUIDES



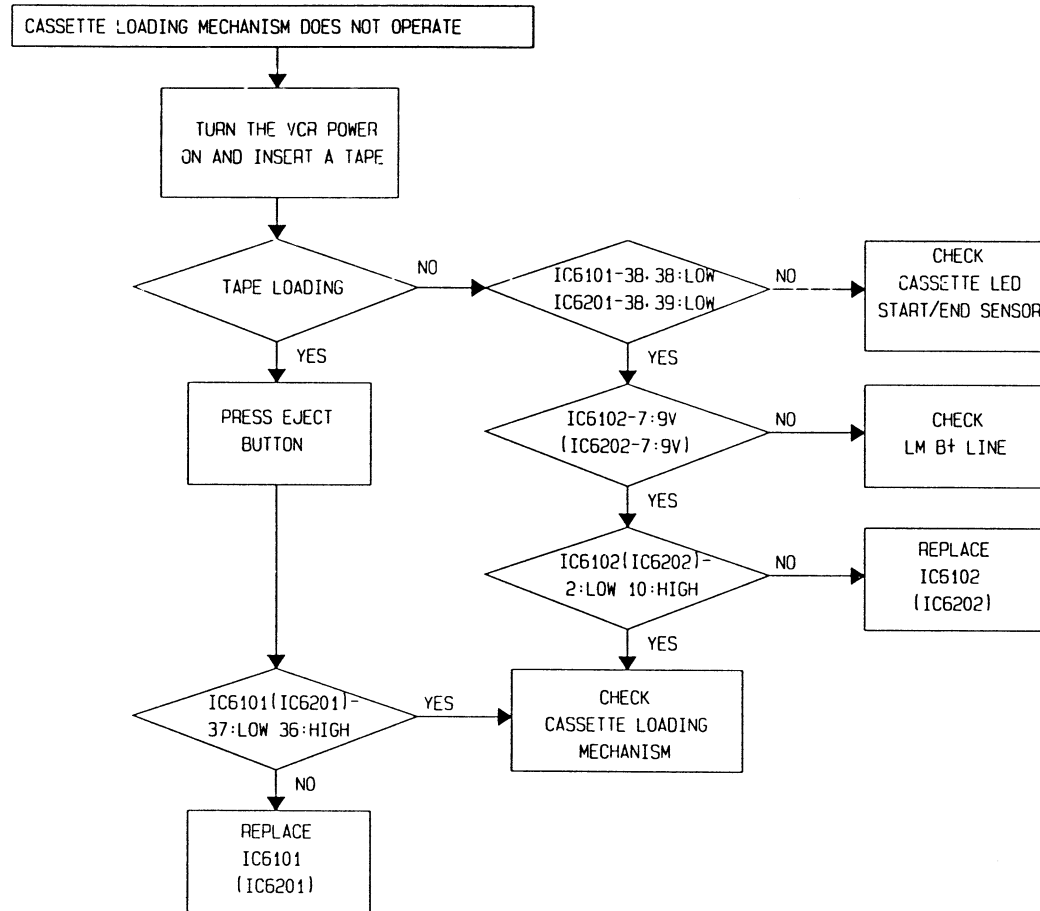
Rewind Mode Inoperative



VRD100/VRD120HF TROUBLESHOOTING GUIDES



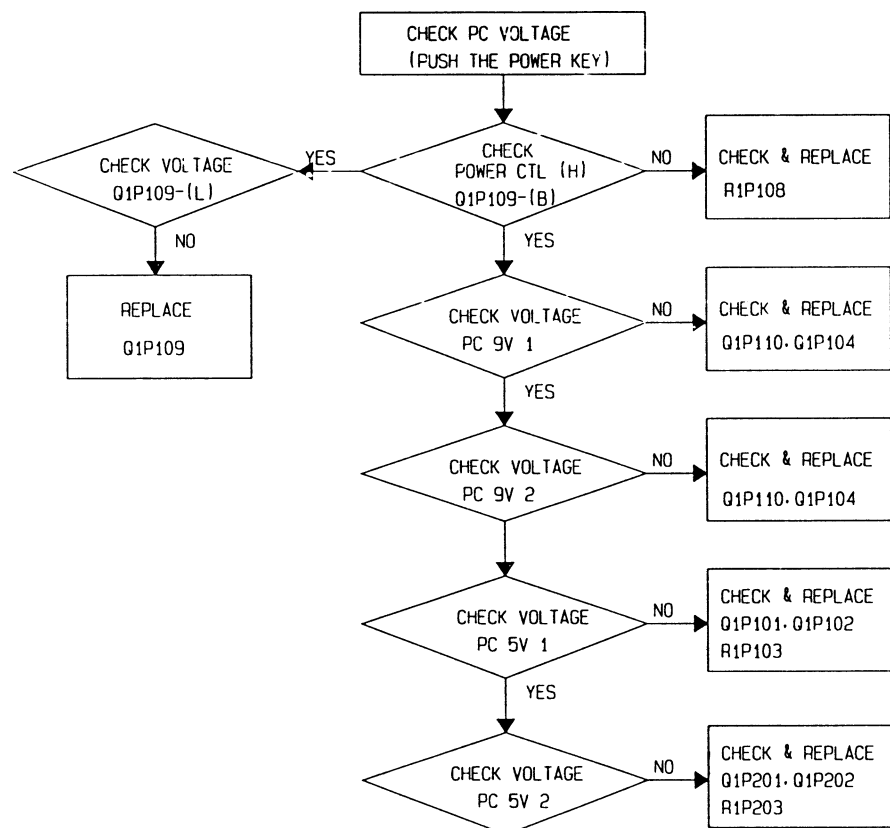
Cassette Loading Mechanism Does Not Operate



VRD100/VRD120HF TROUBLESHOOTING GUIDES



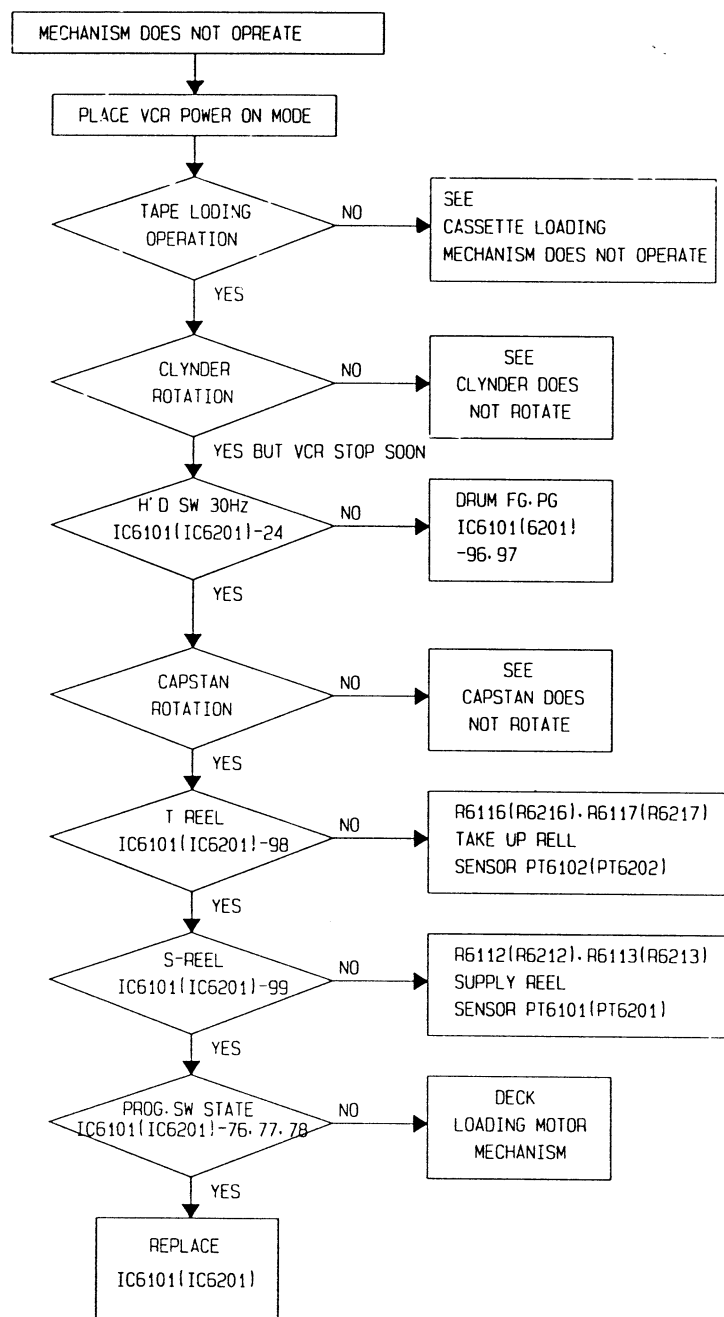
Check PC Voltage (Push the Power Key)



VRD100/VRD120HF TROUBLESHOOTING GUIDES



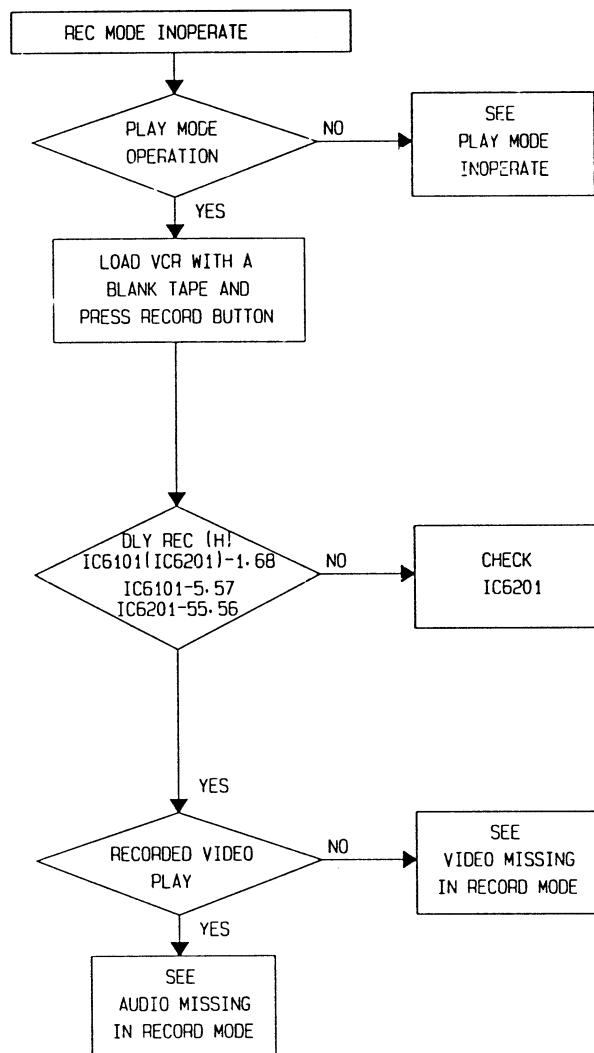
Mechanism Does Not Operate



VRD100/VRD120HF TROUBLESHOOTING GUIDES



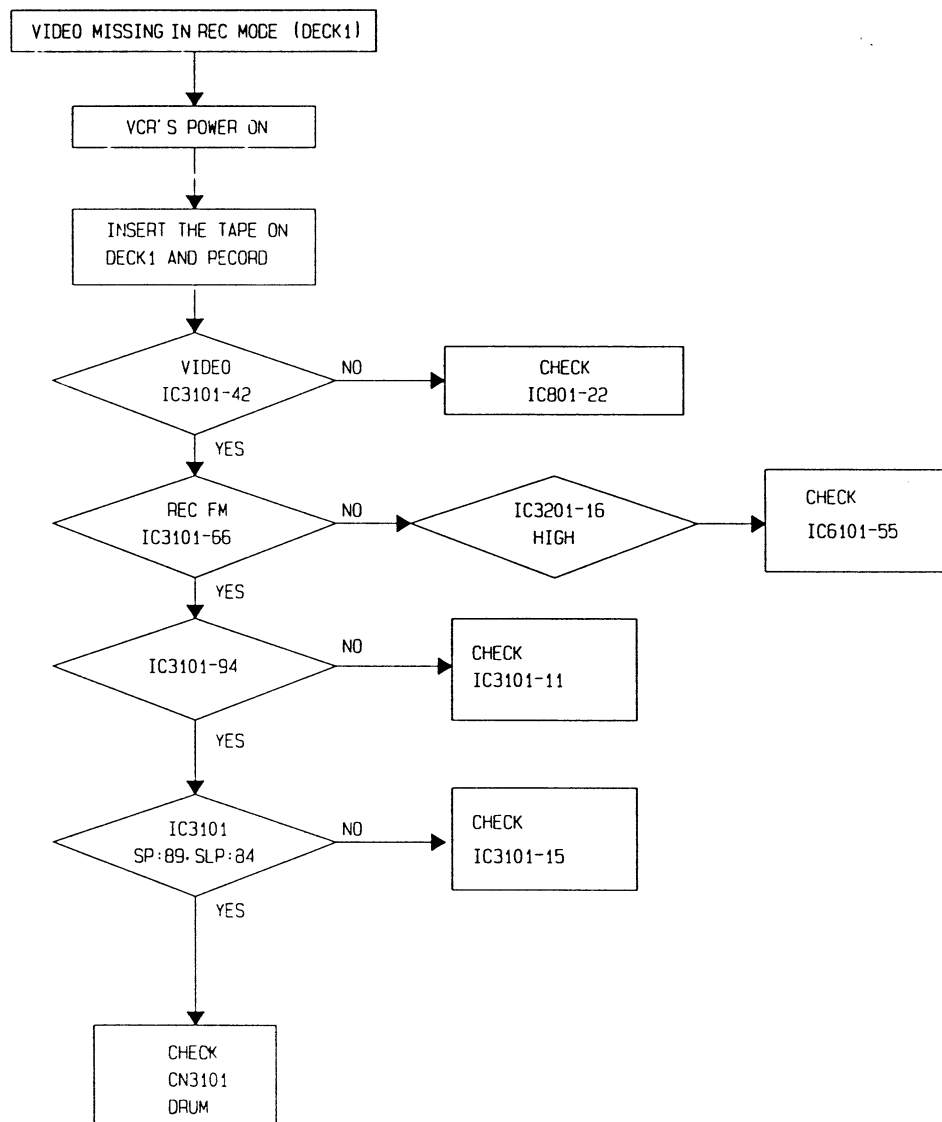
Record Mode Inoperative



VRD100/VRD120HF TROUBLESHOOTING GUIDES



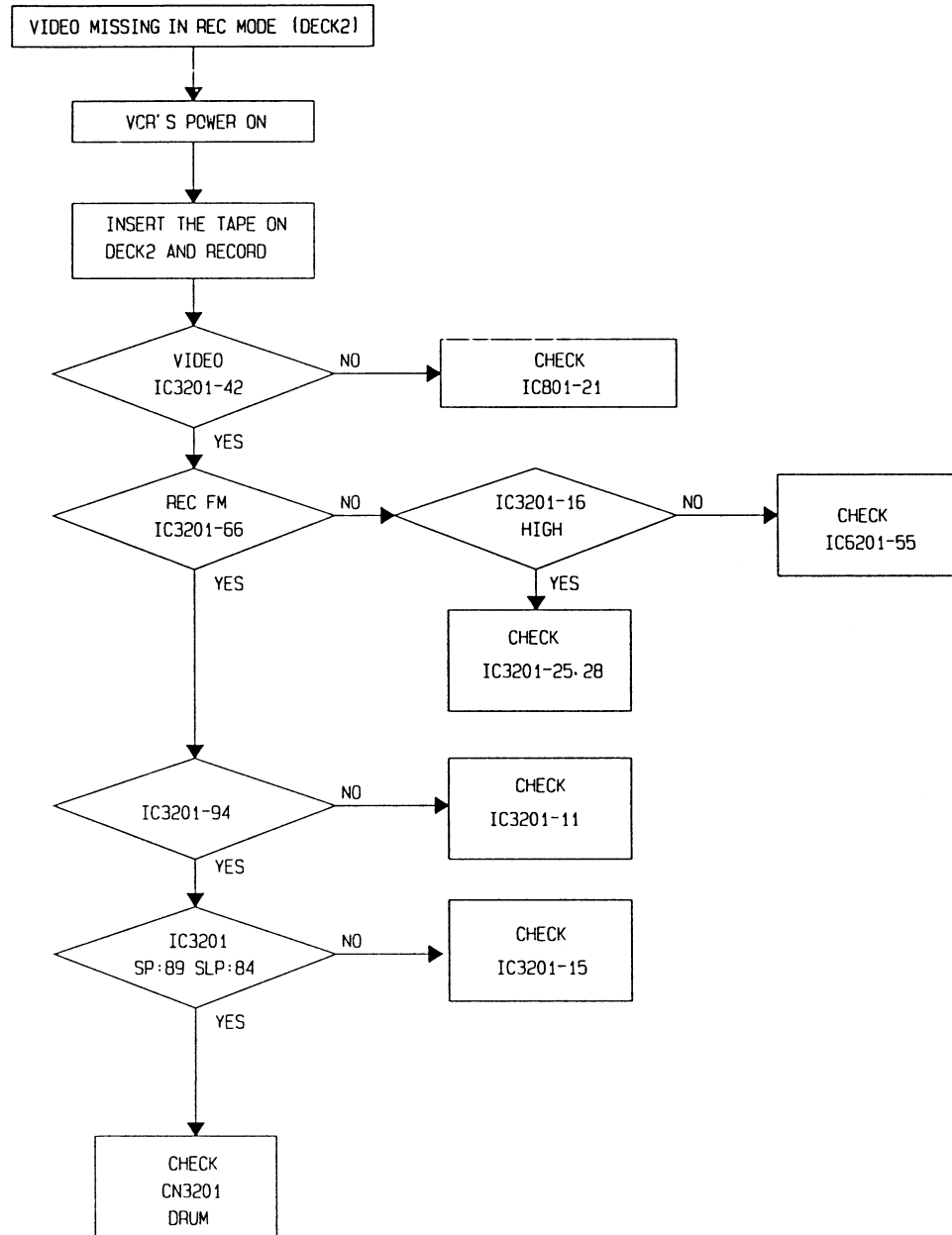
Video Missing in Record Mode (Deck 1)



VRD100/VRD120HF TROUBLESHOOTING GUIDES



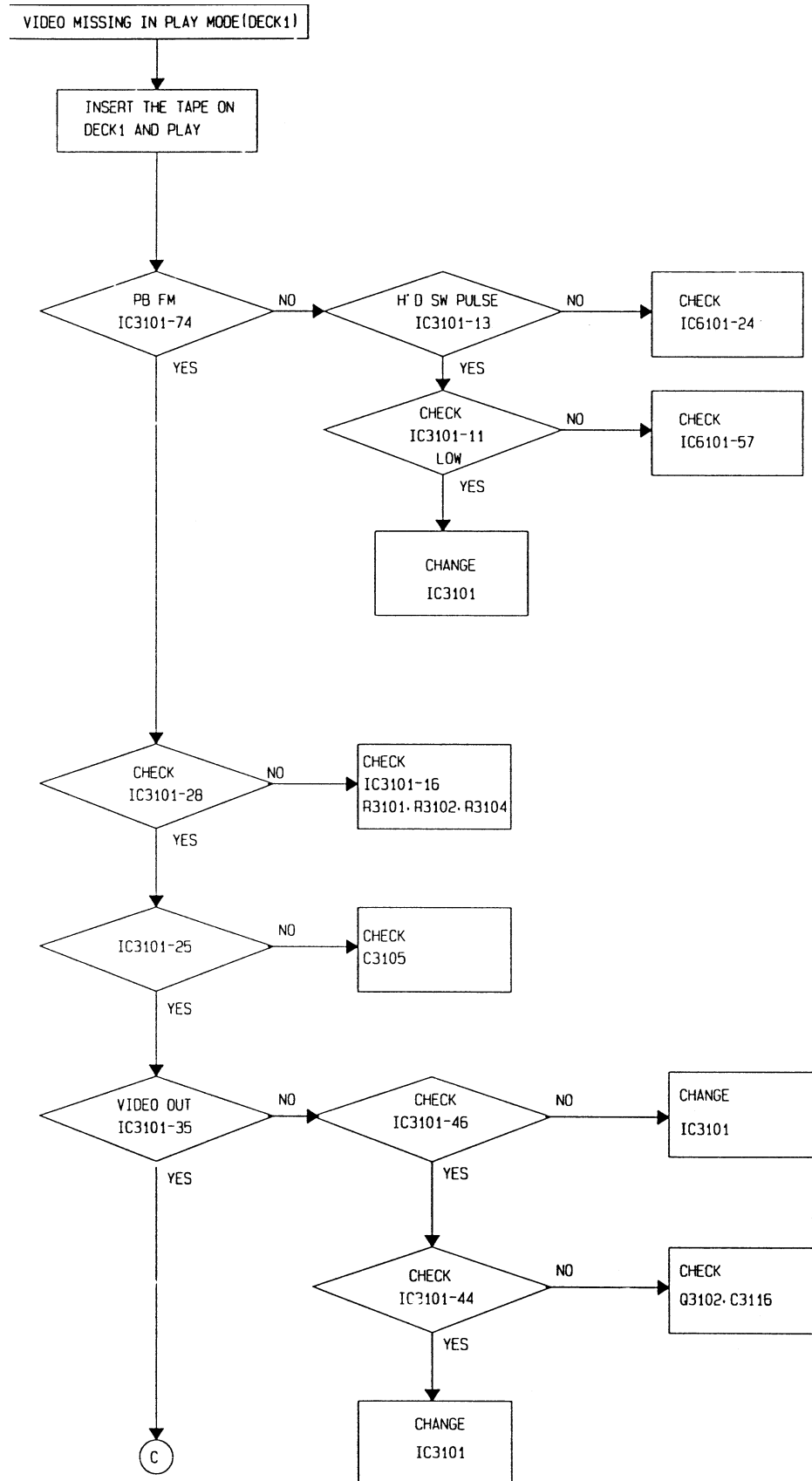
Video Missing in Record Mode (Deck 2)



VRD100/VRD120HF TROUBLESHOOTING GUIDES



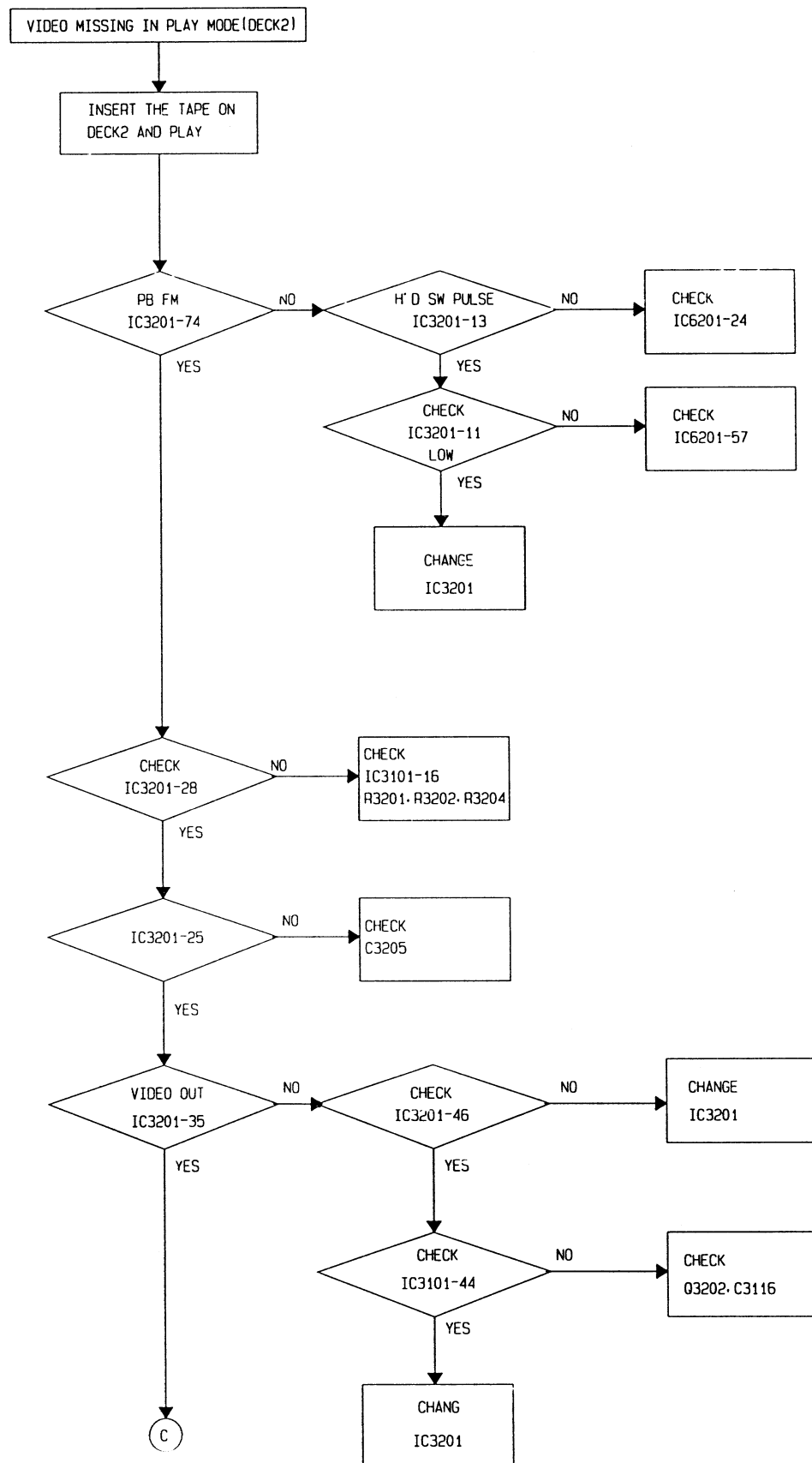
Video Missing in Play Mode (Deck 1)



VRD100/VRD120HF TROUBLESHOOTING GUIDES



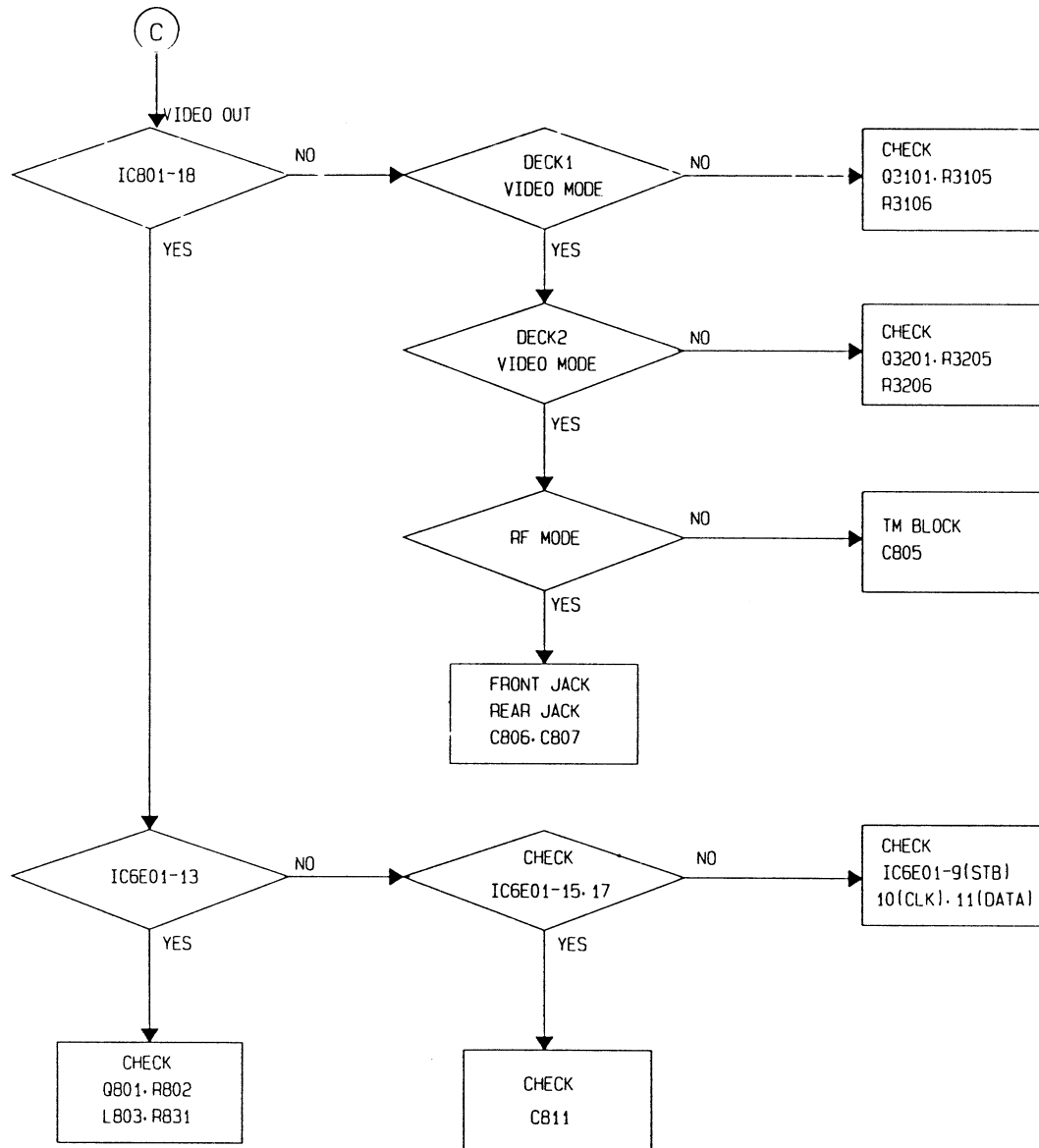
Video Missing in Play Mode (Deck 2)



VRD100/VRD120HF TROUBLESHOOTING GUIDES



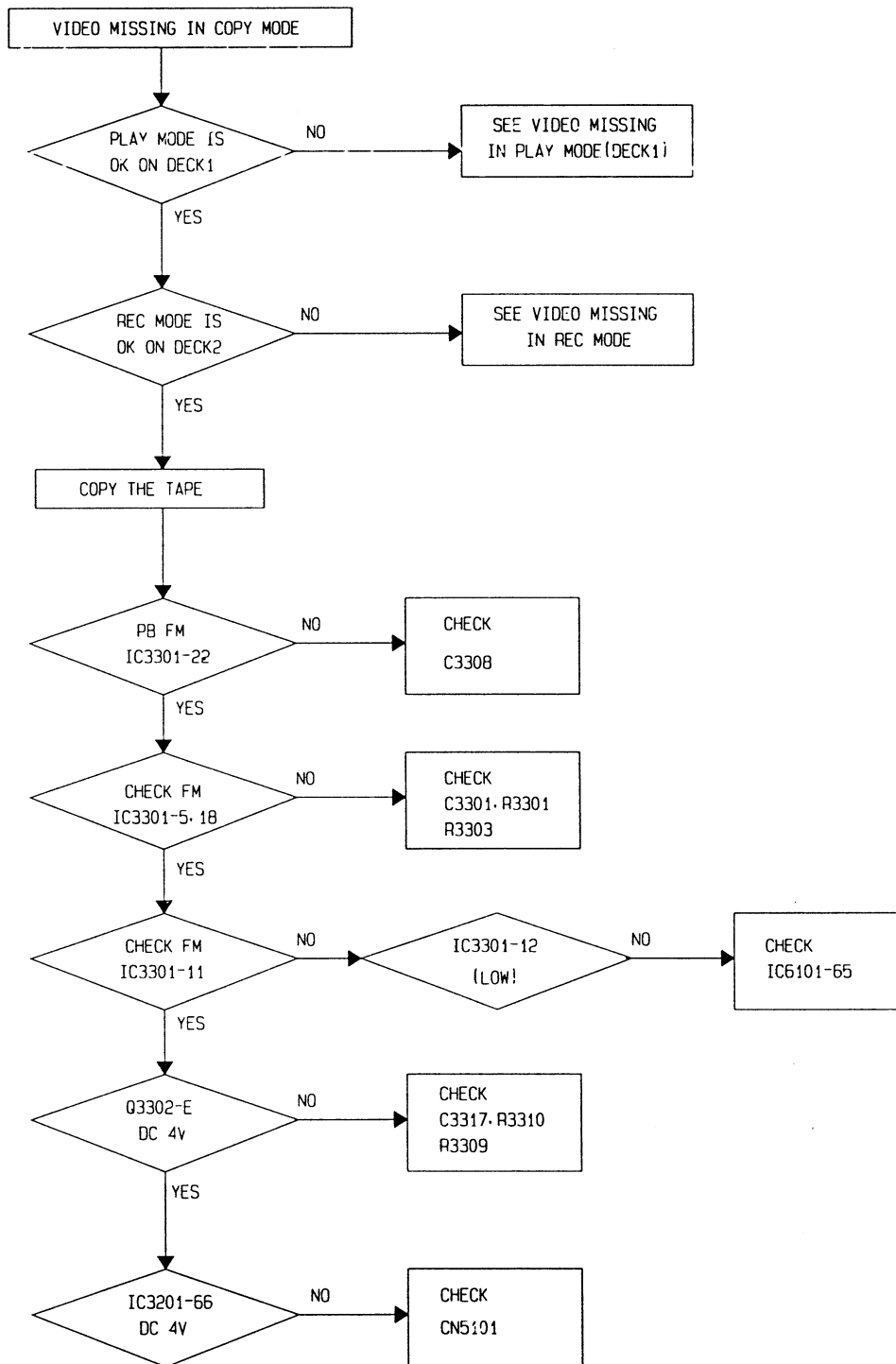
Video Missing in Play Mode (Cont'd)



VRD100/VRD120HF TROUBLESHOOTING GUIDES



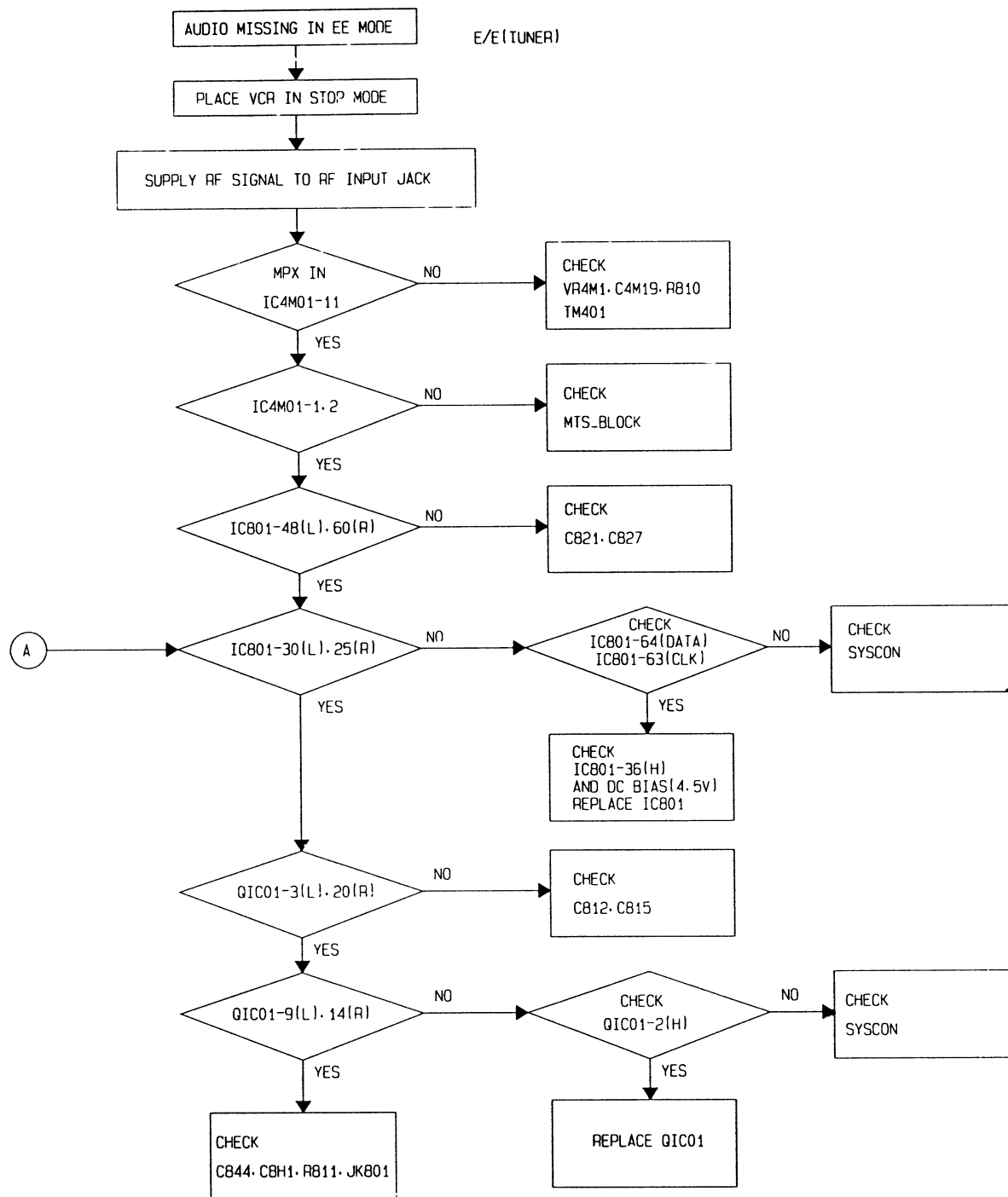
Video Missing in Copy Mode



VRD100/VRD120HF TROUBLESHOOTING GUIDES



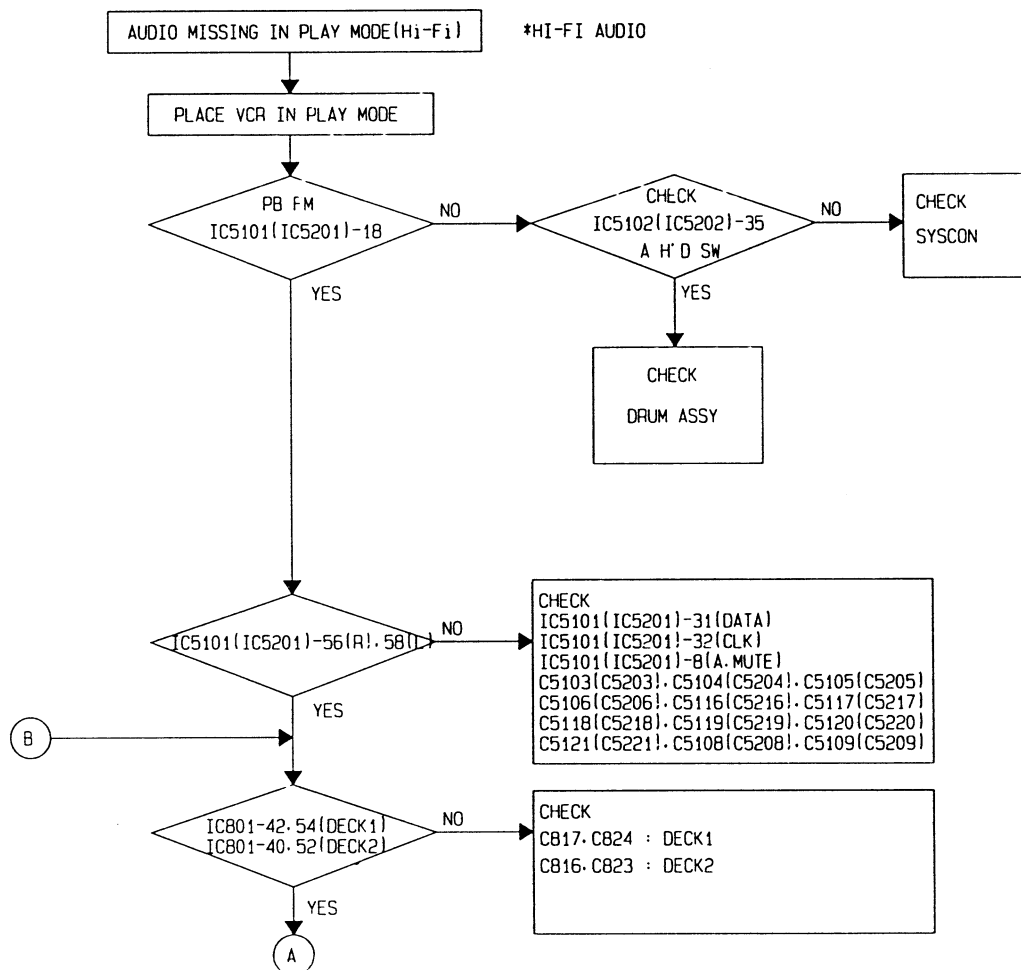
Audio Missing In EE Mode



VRD100/VRD120HF TROUBLESHOOTING GUIDES



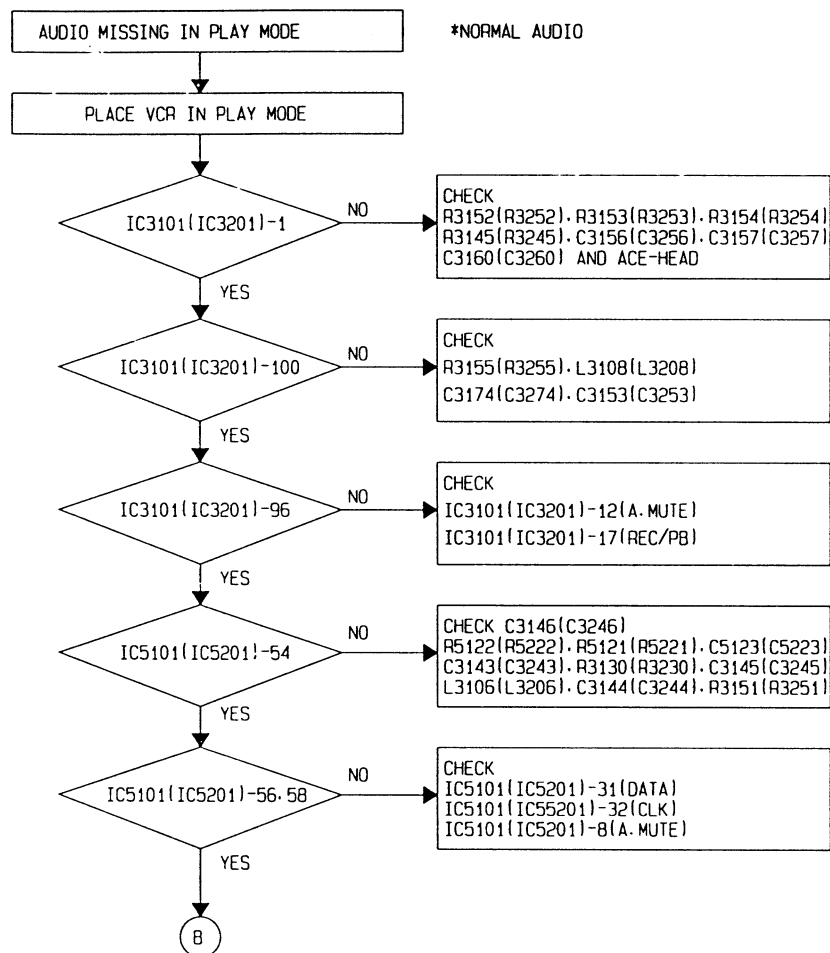
Audio Missing in Play Mode (Hi-Fi Mode)



VRD100/VRD120HF TROUBLESHOOTING GUIDES



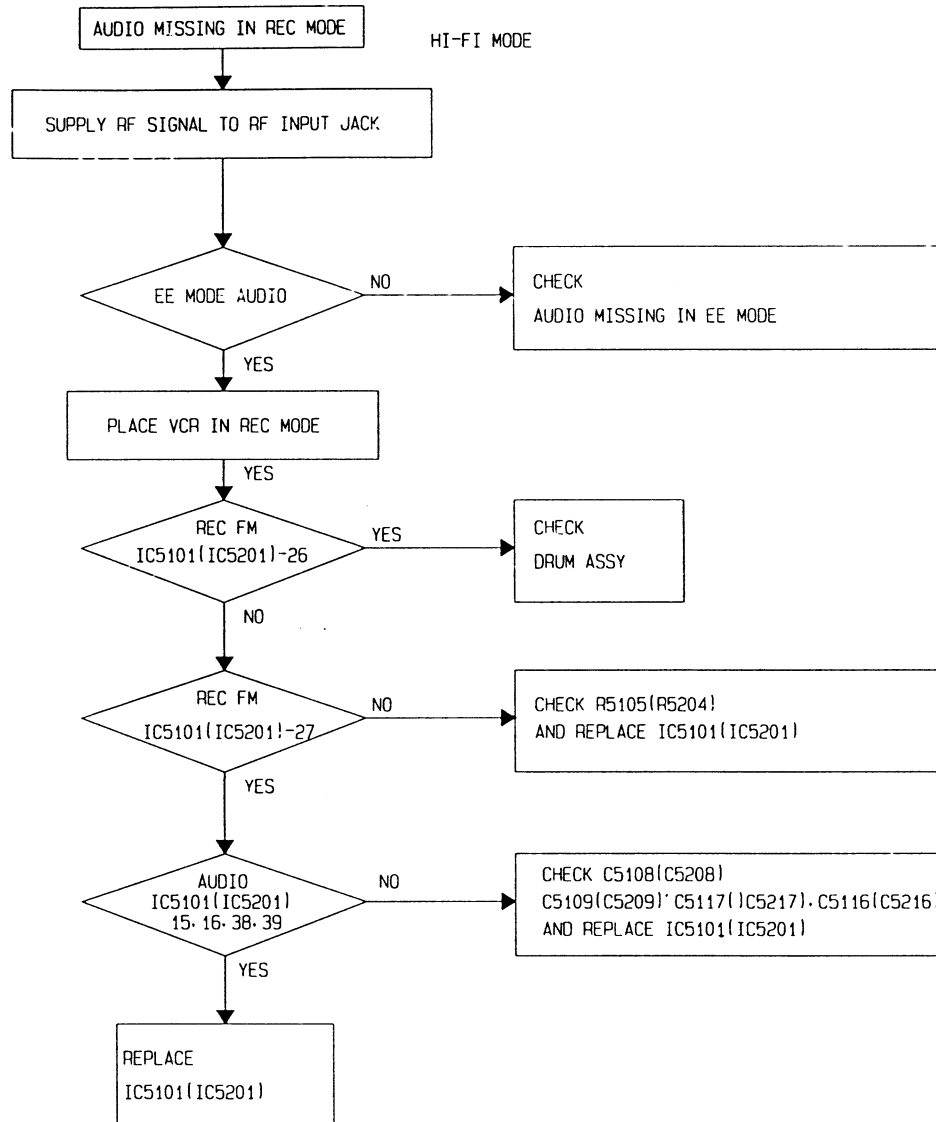
Audio Missing in Play Mode (Normal Mode)



VRD100/VRD120HF TROUBLESHOOTING GUIDES



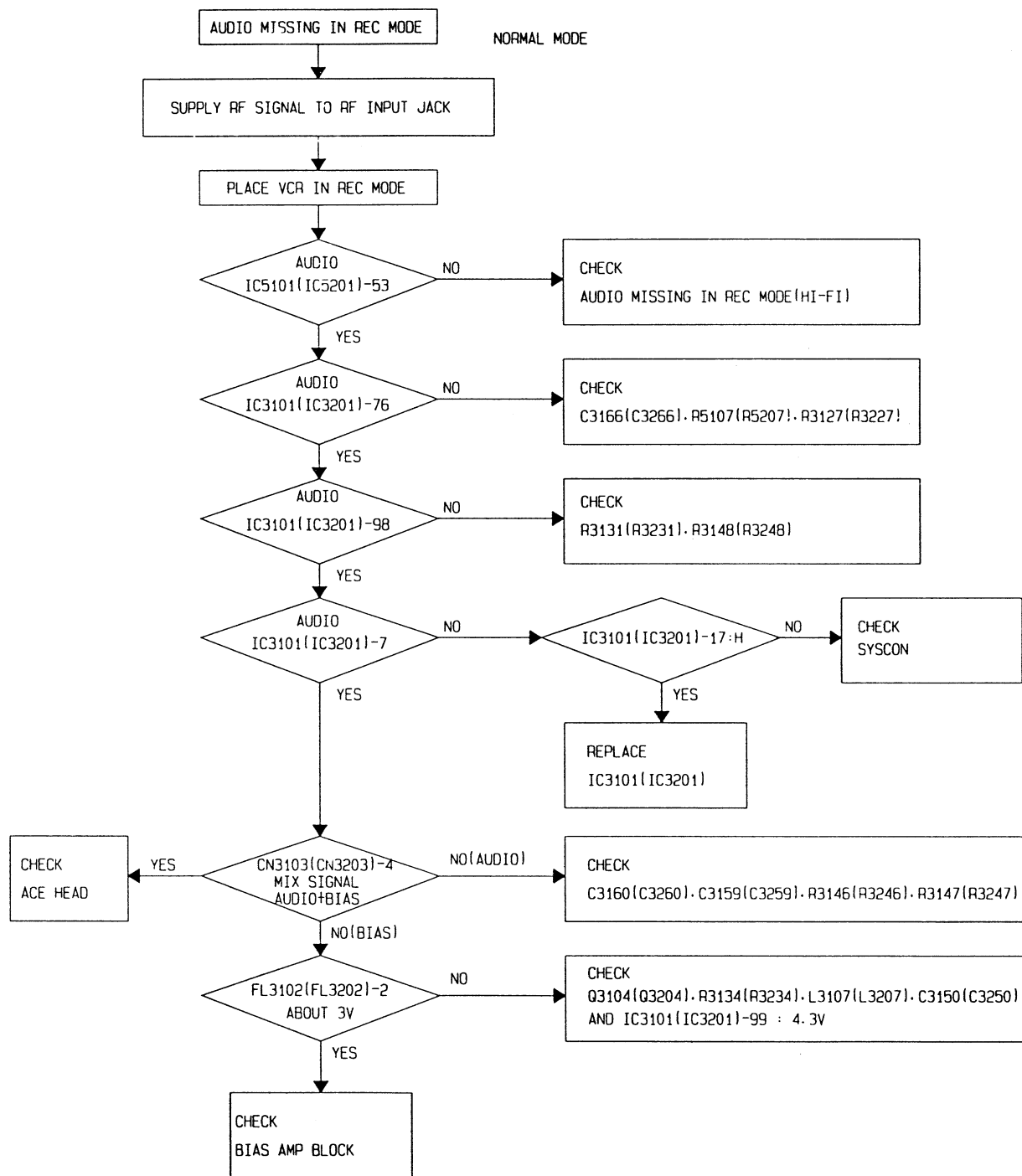
Audio Missing in Record Mode (Hi-Fi Mode)



VRD100/VRD120HF TROUBLESHOOTING GUIDES

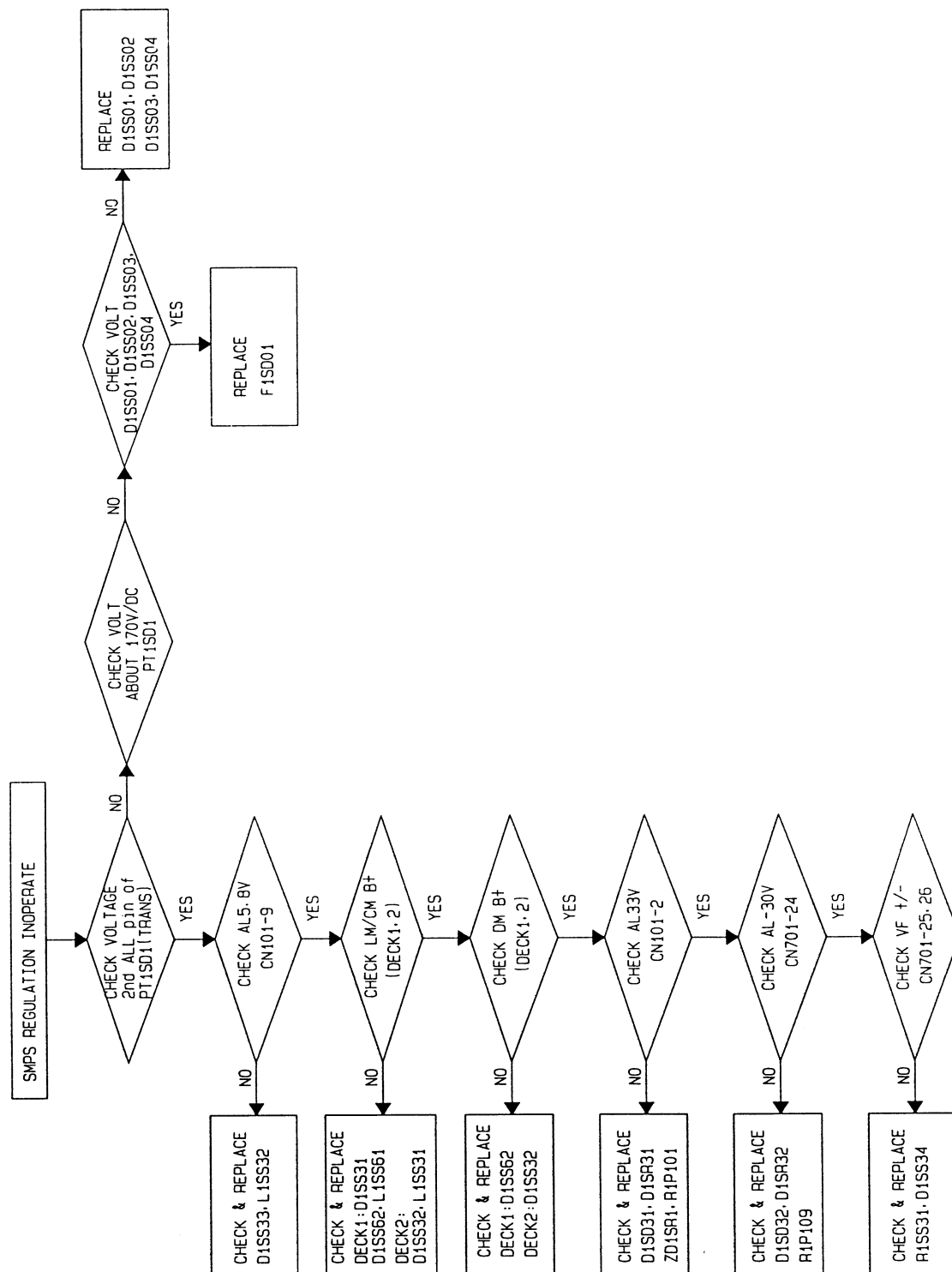


Audio Missing in Record Mode (Normal Mode)



VRD100/VRD120HF TROUBLESHOOTING GUIDES

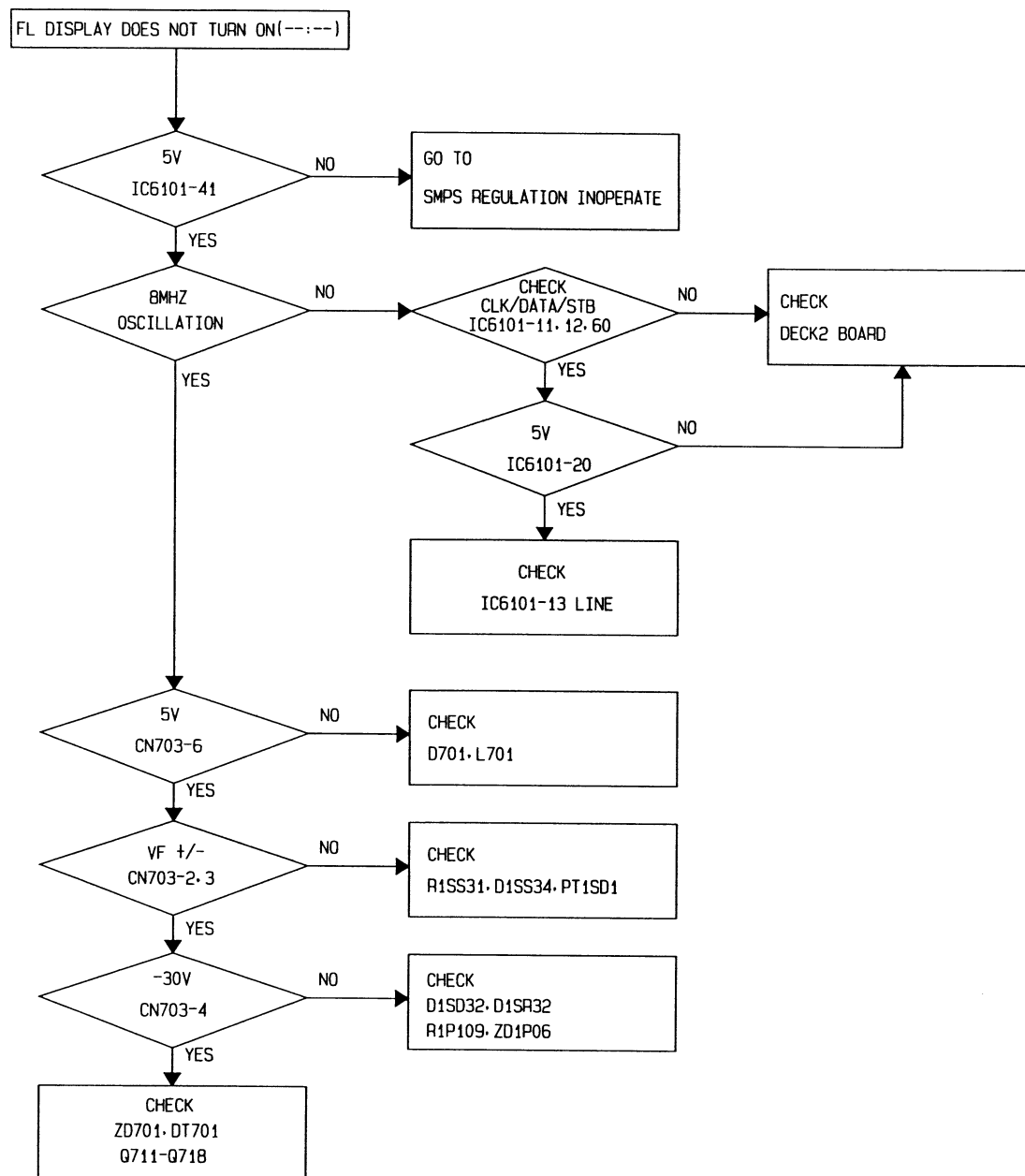
S.M.P.S. Regulation Inoperative



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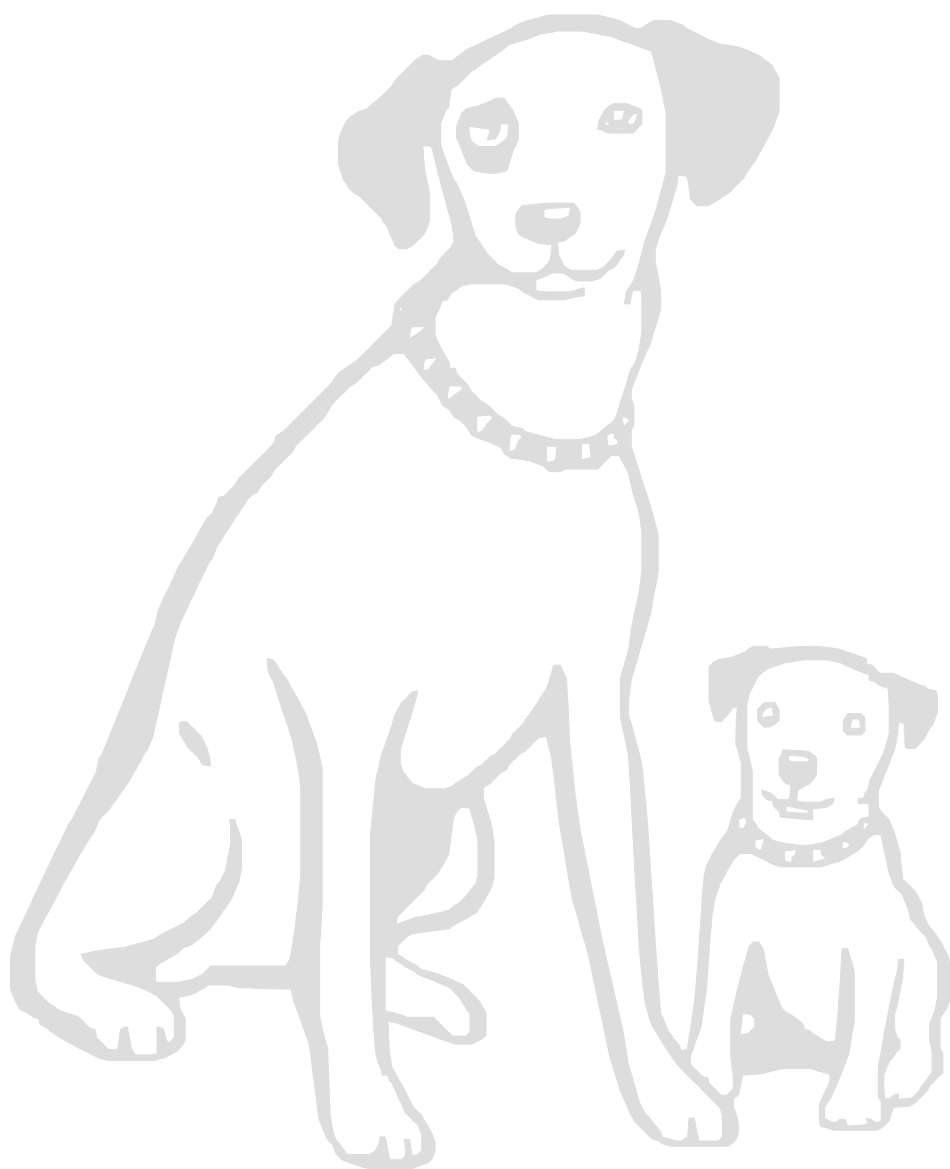


FL Display Does Not Turn ON (---:--)



WAVEFORMS SUBINDEX

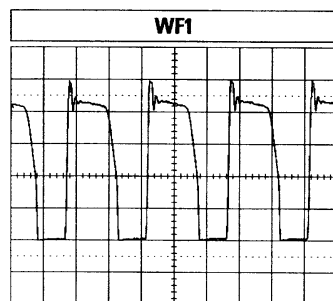
S.M.P.S./Power Drive Section
Logic Section
A/V Section
TM-Block Section
Hi-Fi Section (VRD120HF Only)
OSD Section



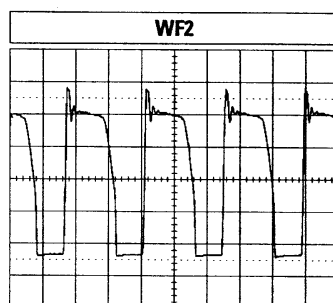
VRD100/VRD120HF WAVEFORMS



S.M.P.S./Power Drive Section

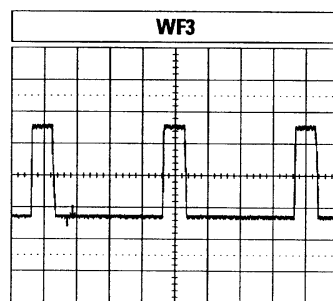


Q1SR11-COLLECTOR
240Vp-p
POWER OFF
50V/5 μ s

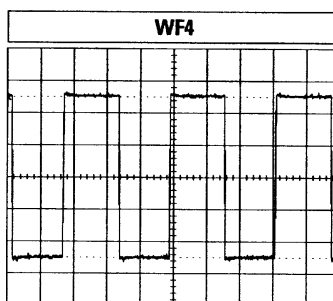


Q1SR11-COLLECTOR
270Vp-p
POWER ON
50V/5 μ s

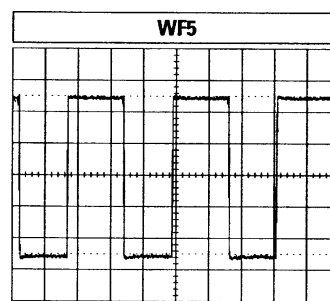
Logic Section



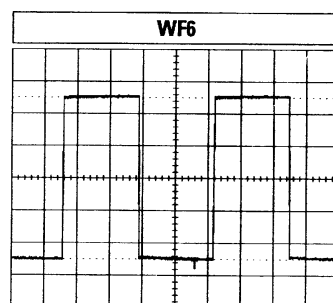
IC6101-3/IC6201-3
3Vp-p
PB
1V/1s



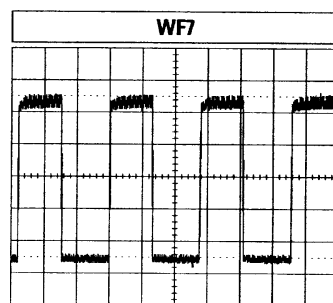
IC6101-9/IC6201-9
5Vp-p
PB
1V/5 μ s



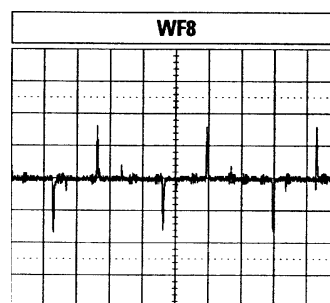
IC6101-10/IC6201-10
5Vp-p
PB
1V/5 μ s



CN6104-6/CN6204-6
5Vp-p
PB
1V/2ms



CN6105-3/IC6205-3
5Vp-p
PB
1V/5ms



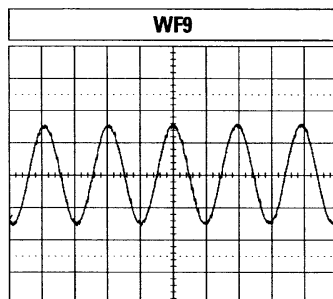
TP6103/TP6201 (CONTROL)
3.2Vp-p
PB
1V/10ms



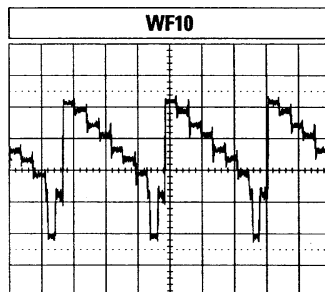
VRD100/VRD120HF WAVEFORMS



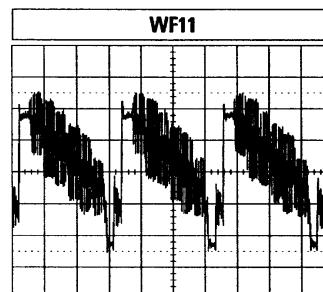
A/V Section



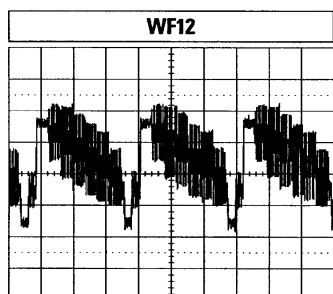
IC3101-7/IC3201-7
3Vp-p
REC
1V/5ms



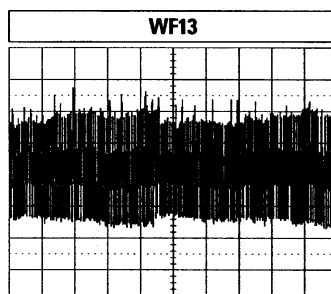
IC3101-28/IC3201-28
440mVp-p
PB/REC
100mV/20μs



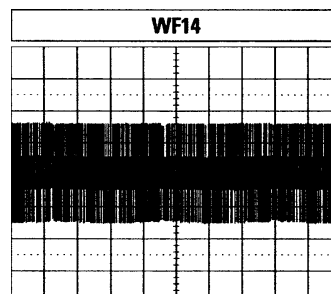
IC3101-35/IC3201-35
250mVp-p
PB/REC
50mV/20μs



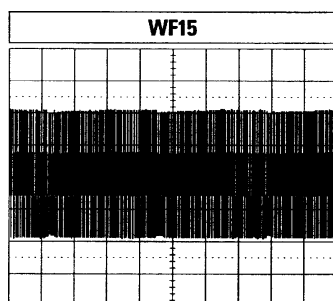
IC3101-49/IC3201-49
400mVp-p
PB/REC
100mV/20μs



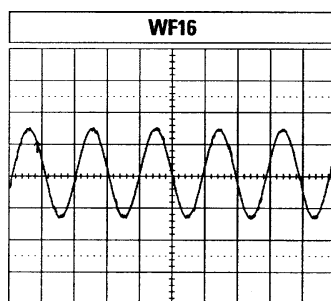
TP6102/TP801 (ENVELOPE)
600mVp-p
PB
200mV/5ms



IC3101-84/IC3201-48
3.1Vp-p
REC (SLP)
1V/5ms



IC3101-89/IC3201-89
4Vp-p
REC (SP)
1V/5ms



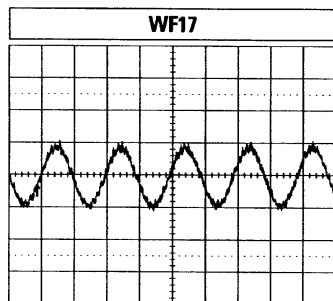
IC3101-96/IC3201-96
1.4Vp-p
PB
0.5V/5ms



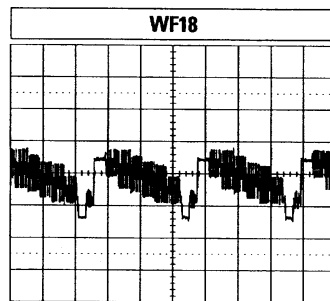
VRD100/VRD120HF WAVEFORMS



TM-Block Section

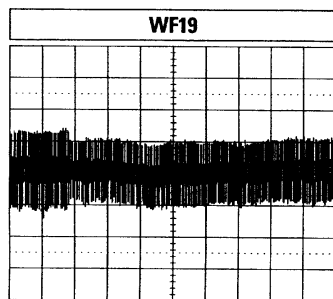


TM401-17
100mVp-p
REC
50mV/5ms

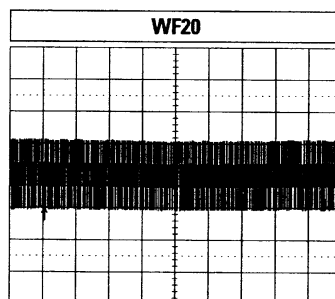


TM401-20
100mVp-p
REC
50mV/20μs

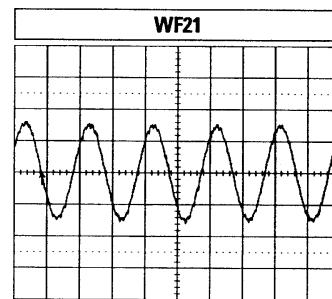
Hi-Fi Section (VRD120HF Only)



IC5101-18/IC5201-18
50mVp-p
PB (SP Mode)
20mV/2ms

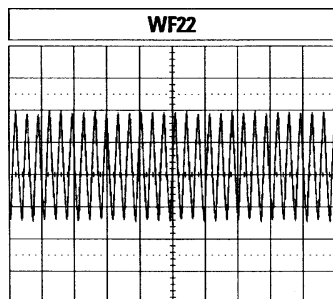


IC5101-26/IC5201-26
200mVp-p
REC
100mV/2ms

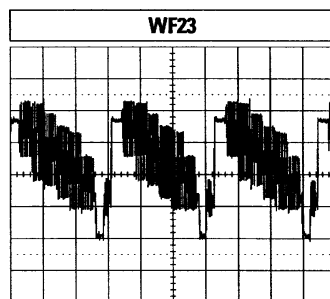


IC5101-56, 58/IC5201-56, 58
150mVp-p
PB/REC
50mV/5ms

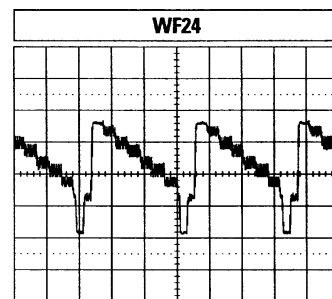
OSD Section



IC6E01-2, 3
620mVp-p
PB/REC
200mV/1μs



IC6E01-13 (VIDEO OUTPUT)
2.2Vp-p
PB/REC
5V/20μs

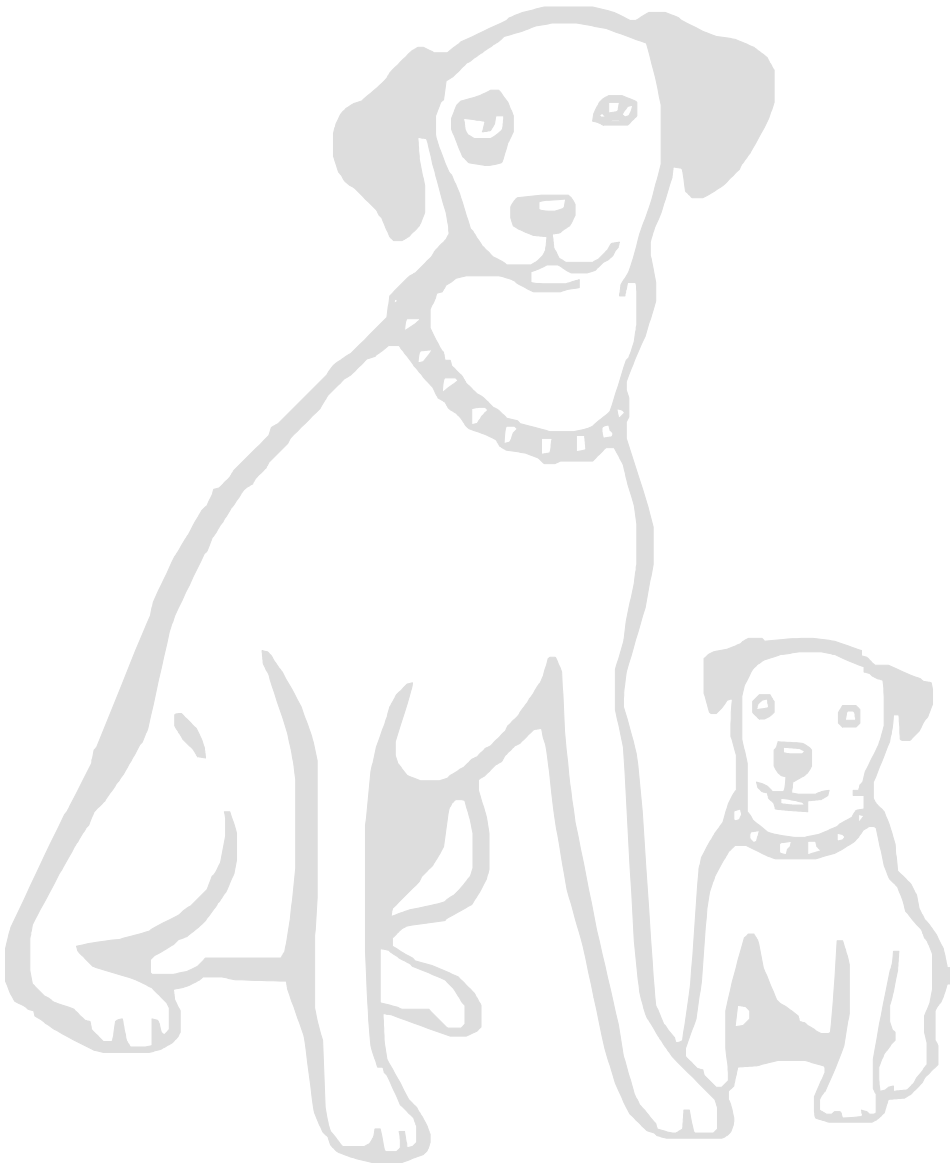


IC6E01-15 (VIDEO INPUT)
1.8Vp-p
PB/REC
5V/20μs



VOLTAGE CHARTS SUBINDEX

Main A
Main B
Function/Timer



VRD100/VRD120HF VOLTAGE CHARTS



Main A

MODE PIN	PLAY	STOP	REC
IC1SS1	PC-123		
A	6.1	6.2	6.0
K	5.0	5.0	5.0
C	3.8	3.5	4.0
E	0.8	0.7	0.8
IC1SS2	KA431Z		
A	0	0	0
K	5.0	5.0	5.0
R	2.6	2.5	2.5
IC3101	(IC3201)LA71069		
1	2.4	2.5	2.4
2	2.4	2.5	2.4
3	2.4	2.5	2.5
4	2.4	2.5	3.0
5	0	0	3.2
6	2.4	2.5	3.5
7	2.5	2.5	3.0
8	0	0	0
9	0	0	0
10	5.2	5.5	5.3
11	0	0	5.2
12	0	0	0
13	0.7	0.7	0.7
14	0.7	0.7	0.7
15	0	0	0
16	0	5.3	5.3
17	0.3	3.0	5.3
18	1.6	1.6	1.6
19	0	0	0
20	1.8	1.5	1.5
21	5.1	5.5	5.5
22	0.9	1.0	0.9
23	3.5	3.6	3.7
24	0.5	2.4	0.5
25	0.6	3.2	0.5
26	0.5	2.5	0.6
27	0	0	0
28	0.5	1.7	0.5
29	1.0	1.1	1.1
30	0	5.0	0
31	0	0	0
32	0	0	0
33	4.6	4.6	4.6
34	4.6	4.6	4.6
35	2.0	2.4	2.4
36	1.0	1.1	1.1
37	1.4	1.5	1.5
38	2.6	2.7	2.8
39	3.5	3.8	3.9
40	2.6	2.8	2.7

MODE PIN	PLAY	STOP	REC
41	5.0	5.2	5.1
42	1.0	3.0	3.2
43	3.3	3.3	3.3
44	0.3	2.7	2.8
45	3.1	3.3	3.3
46	0.3	2.7	2.7
47	0.3	0.4	0.4
48	0	0	0
49	0.3	0.4	0.4
50	0	0	0
51	0.4	0.5	0.5
52	2.3	2.3	2.3
53	0	0	0
54	5.1	5.5	5.4
55	0	0	0
56	5.1	5.4	5.4
57	5.1	5.4	5.4
58	3.5	3.8	3.7
59	5.0	0	0
60	3.5	3.8	3.7
61	0.5	0.5	0.5
62	0.5	0.5	2.2
63	2.2	2.2	2.2
64	2.2	2.3	2.4
65	4.0	4.3	4.2
66	0	0	0.5
67	0	0	0
68	4.0	4.1	4.1
69	2.0	2.0	2.0
70	1.6	1.7	1.7
71	2.4	2.5	2.5
72	0.4	2.9	2.9
73	2.3	2.5	2.5
74	0.5	1.8	1.8
75	5.2	5.5	5.4
76	2.5	2.5	2.5
77	0	0	0
78	2.4	2.5	2.5
79	2.4	2.5	2.5
80	2.4	2.5	2.5
81	0	0	0
82	0.8	1.9	0
83	0.8	1.9	0
84	0.8	1.9	0
85	0.8	1.9	0
86	0	0	0
87	5.2	5.4	5.4
88	1.8	1.9	4.5
89	1.9	1.9	3.4
90	1.9	1.9	4.5

MODE PIN	PLAY	STOP	REC
91	1.9	1.9	4.5
92	0	0	1.5
93	0.4	0	0
94	0	1.6	1.6
95	0	0	0
96	1.1	0	0
97	0.6	0	0
98	0.4	0	0
99	5.2	5.7	4.6
100	0	2.5	2.6
IC5101	(IC5201)LA72634		
1	0	0	0
2	0	0	0
3	2.6	2.6	2.6
4	0.4	2.5	2.5
5	0.4	2.5	2.5
6	0	0	0
7	0	0	0
8	0	0	0
9	0.3	0	0
10	2.5	2.6	2.5
11	0.8	2.6	2.5
12	2.6	2.6	2.5
13	0.6	2.6	2.5
14	5.0	5.2	5.0
15	0.3	2.6	2.5
16	0	0	0
17	0	0	0
18	0.5	0.9	0.9
19	1.1	2.1	2.1
20	5.2	5.1	5.0
21	0	0	0
22	2.1	2.0	4.1
23	0	0	0
24	0	0	3.8
25	2.1	2.1	4.2
26	2.1	2.1	3.8
27	0	0	1.8
28	0	0	0
29	1.5	1.5	1.4
30	5.1	5.1	5.0
31	5.2	5.2	5.2
32	5.2	5.2	5.2
33	0	0	0
34	0	0	0
35	5.2	5.2	5.2
36	5.1	5.1	5.0
37	0.7	5.1	3.6
38	0.4	0	0
39	2.5	2.5	2.5

MODE PIN	PLAY	STOP	REC
40	0.8	0.4	0.4
41	2.6	2.6	2.6
42	0	0	0
43	0	0	0
44	0	0	0
45	0.3	0.3	0.3
46	0.4	0.4	0.4
47	2.6	2.6	2.5
48	0	0	0
49	0	0	0
50	2.6	2.6	2.6
51	5.3	5.3	5.0
52	0	0	0
53	0.4	0.4	0.4
54	2.6	2.6	0
55	1.3	1.3	1.3
56	1.4	1.4	1.4
57	1.5	1.5	1.5
58	1.4	1.3	1.4
59	1.4	1.4	1.4
60	9.4	9.4	9.4
61	0	0	0
62	5.2	5.2	5.0
63	0	0	0
64	2.5	2.5	2.5
IC6101	IC-MICOM		
1	2.9	0	5.0
2	SP:0V SLP:5V	SP:0V SLP:5V	SP:0V SLP:5V
3	0	0	5.0
4	0	0	0
5	0	0	5.0
6	0	0	0
7	5.0	5.0	5.0
8	0	0	0
9	5.2	5.1	5.1
10	5.2	5.2	5.2
11	5.4	5.3	5.3
12	5.1	5.2	5.2
13	5.1	5.2	5.2
14	5.1	5.2	5.2
15	0	0	0
16	5.0	5.3	5.3
17	0	0	0
18	4.0	3.9	3.9
19	5.1	3.0	3.0
20	5.0	5.0	5.0
21	0	0	0
22	0	0	0
23	5.0	5.2	5.2
24	5.0	5.2	5.2



VRD100/VRD120HF VOLTAGE CHARTS



Main A (Cont'd)

MODE PIN	PLAY	STOP	REC
25	0	0	0
26	0	0	0
27	0	0	0
28	0	0	0
29	5.0	5.2	5.2
30	5.0	5.2	5.2
31	0	0	0
32	5.0	5.3	5.3
33	5.0	5.3	5.3
34	5.0	5.3	5.3
35	5.0	5.3	5.3
36	5.0	5.3	5.3
37	5.0	5.3	5.3
38	4.9	5.0	5.0
39	4.9	5.0	5.0
40	0	0	0
41	5.1	5.3	5.3
42	5.1	5.3	5.3
43	5.1	5.3	5.3
44	5.1	5.3	5.3
45	5.1	5.3	5.3
46	5.1	5.3	5.3
47	5.1	5.3	5.3
48	5.1	5.3	5.3
49	5.1	5.3	5.3
50	5.1	5.3	5.3
51	5.1	5.3	5.3
52	5.1	5.3	5.3
53	5.1	5.3	5.3
54	0	5.3	0
55	0	0	0
56	5.0	5.3	5.3
57	0	5.2	5.2
58	5.1	5.3	5.3
59	0	0	0
60	5.1	5.3	5.3
61	0	0	0
62	0	0	0
63	0	0	0
64	5.1	5.3	5.3
65	5.1	5.3	5.3
66	5.1	5.3	5.3
67	5.1	5.3	5.3
68	0	0	5.3
69	5.1	5.3	5.3
70	5.1	5.3	5.3
71	0	0	0
72	0	0	0
73	0	0	0
74	5.1	5.3	5.3

MODE PIN	PLAY	STOP	REC
75	5.1	5.3	5.3
76	0	0	0
77	5.3	5.3	5.3
78	0	0	0
79	0	0	0
80	0	0	0
81	0	0	0
82	0.4	0.9	0
83	0	0	0
84	0	0	0
85	2.5	2.6	4.3
86	2.6	2.7	4.2
87	2.6	2.6	2.6
88	2.6	2.6	2.6
89	4.3	2.6	2.6
90	2.6	2.6	2.6
91	0	0	0
92	5.1	5.2	5.2
93	5.0	0	5.0
94	0	0	0.5
95	0	0	0
96	0	0	0
97	4.8	4.8	4.8
98	5.1	5.2	5.2
99	5.1	5.2	5.2
100	4.5	4.5	4.5
IC6102 (IC6202)KA3082			
1	0	0	0
2	0.4	0.4	0.4
3	0.8	0.8	0.8
4	0	0	0
5	3.4	3.4	3.4
6	3.4	3.5	3.5
7	15.5	16.5	16.5
8	15.0	16.0	16.0
9	0.8	0.8	0.8
10	0.4	0.4	0.4
IC6CM1 AN3275SB			
1	5.3	5.4	5.4
2	2.0	2.0	2.0
3	3.1	3.1	3.2
4	3.2	3.2	3.2
5	1.0	1.3	1.3
6	0.9	0.9	0.9
7	3.2	3.2	3.3
8	0	0	0
9	0.8	0.8	0.8
10	3.1	3.3	3.2
11	5.2	5.4	5.3
12	5.2	5.3	5.3

MODE PIN	PLAY	STOP	REC
13	5.2	5.3	5.3
14	4.4	4.4	4.4
15	0	0	0
16	4.8	5.0	4.9
17	3.0	3.0	3.0
18	0.7	0.7	0.7
19	0	0	0
20	0	0	0
21	3.9	3.9	3.8
22	3.8	3.8	3.8
23	5.2	5.2	5.2
24	1.5	2.0	2.0
25	5.3	5.3	5.3
26	0	0	0
27	2.5	2.5	2.5
28	2.0	1.9	3.3
29	2.7	2.7	2.7
30	2.0	1.9	1.9
31	3.4	3.4	3.4
32	0.9	0.9	0.9
33	2.2	2.0	2.0
34	3.1	3.1	3.1
35	5.2	5.2	5.2
36	0	0	0
Q1P101 KSC2328			
E	5.4	5.4	5.4
C	6.2	6.0	6.0
B	6.0	6.0	6.0
Q1P102 KSC2328			
E	5.4	5.4	5.4
C	6.2	6.0	6.0
B	6.0	6.0	6.0
Q1P104 KSC2328			
E	9.5	9.4	9.4
C	12.0	12.0	12.0
B	10.0	10.0	10.0
Q1P107 KSC2328			
E	12.4	13.0	13.0
C	16.0	16.0	16.5
B	13.2	13.5	13.5
Q1P108 KSR2001			
E	9.7	10.0	10.0
C	9.8	10.0	10.0
B	0	0	0
Q1P109 KSC945			
E	0	0	0
C	0	0	0
B	0.7	0.7	0.7
Q1P201 KSC2328			
E	5.2	5.4	5.4

MODE PIN	PLAY	STOP	REC
C	5.0	6.1	6.2
B	5.9	6.0	6.2
Q1P202 KSC2328			
E	5.2	5.4	5.4
C	6.0	6.1	6.2
B	5.9	6.0	6.2
Q1P207 KSC2328			
E	12.4	12.8	12.8
C	13.0	14.0	14.0
B	15.5	17.0	16.0
Q1SR11 KSC4419			
E	0.3	0	0.3
C	220	220	220
B	1.6	1.5	1.7
Q1SR12 KTC3203			
E	0	0	0
C	1.6	1.5	1.7
B	0.7	0.8	0.8
Q3101 KSA733			
E	1.0	1.0	1.0
C	0	0	0
B	1.0	1.0	1.0
Q3102 KSA733			
E	0.3	0.4	0.6
C	0	0	0
B	0.3	0.4	0.4
Q3103 KSC945			
E	0.4	0.4	0.4
C	5.3	5.5	5.4
B	0.3	0.3	0.3
Q3104 KSA733			
E	5.4	5.5	5.4
C	0	0.3	0
B	5.4	5.4	4.6
Q3105 KTC3203			
E	0	0	0.9
C	0	0	5.5
B	0.3	0.3	2.1
Q3106 KSA733			
E	5.4	5.5	5.5
C	5.4	0	10.0
B	4.8	0	0
Q3107 KTC3203			
E	0	0	9.2
C	0	0	0
B	0.7	0	12.0
Q3108 KTC3203			
E	0	0	4.2
C	0	0	4.9
B	0.7	0	12.0



VRD100/VRD120HF VOLTAGE CHARTS

Main A (Cont'd)

MODE PIN	PLAY	STOP	REC
Q3111	KSC945		
E	0	0.3	0.4
C	5.4	5.3	5.3
B	0	2.0	4.0
Q6CM01	KSC945		
E	1.4	1.4	1.4
C	5.3	5.3	5.3
B	1.4	1.4	1.4
Q711	KSA733		
E	5.4	5.4	5.4
C	30.0	30.0	30.0
B	0.8	0.8	0.8
Q712	KSA733		
E	5.4	5.4	5.4
C	30.0	30.0	30.0
B	0.8	0.8	0.8
Q713	KSA733		
E	5.4	5.4	5.4
C	30.0	30.0	30.0
B	0.8	0.8	0.8
Q714	KSA733		
E	5.4	5.4	5.4
C	30.0	30.0	30.0
B	0.8	0.8	0.8
Q715	KSA733		
E	5.4	5.4	5.4
C	30.0	30.0	30.0
B	0.8	0.8	0.8
Q716	KSA733		
E	5.4	5.4	5.4
C	30.0	30.0	30.0
B	0.8	0.8	0.8
Q717	KSA733		
E	5.4	5.4	5.4
C	30.0	30.0	30.0
B	0.8	0.8	0.8
Q718	KSA733		
E	5.4	5.4	5.4
C	30.0	30.0	30.0
B	0.8	0.8	0.8



VRD100/VRD120HF VOLTAGE CHARTS



Main B

MODE PIN	PLAY	STOP	REC
IC4M01 CXA2104S			
1	4.1	4.1	4.1
2	4.1	4.1	4.1
3	4.1	4.1	4.1
4	4.3	4.3	4.3
5	0	0	0
6	4.0	4.0	4.0
7	4.0	4.0	4.0
8	4.1	4.1	4.1
9	3.9	3.9	3.9
10	5.3	5.3	5.3
11	4.1	4.1	4.1
12	1.3	1.3	1.3
13	1.2	1.2	1.2
14	0	0	0
15	4.5	4.5	4.5
16	9.0	9.0	9.0
17	4.1	4.1	4.1
18	4.1	4.1	4.1
19	3.5	3.5	3.5
20	4.1	4.1	4.1
21	4.0	4.0	4.0
22	4.1	4.1	4.1
23	4.0	4.0	4.0
24	1.8	1.8	1.8
25	4.1	4.1	4.1
26	4.1	4.1	4.1
27	1.8	1.8	1.8
28	4.1	4.1	4.1
29	0	0	0
30	4.1	4.1	4.1
IC6201 IC-MICOM			
1	2.9	0	5.0
2	SP:0V SLP:5V	SP:0V SLP:5V	SP:0V SLP:5V
3	0	0	5.0
4	0	0	0
5	4.4	4.7	4.3
6	4.7	0	4.7
7	0	4.4	0
8	4.4	2.5	4.5
9	5.2	5.1	5.1
10	5.2	5.2	5.2
11	5.4	5.3	5.3
12	5.1	5.2	5.2
13	5.1	5.2	5.2
14	5.1	5.2	5.2
15	1.8	1.9	1.8
16	2.3	2.3	2.3
17	0	0	0

MODE PIN	PLAY	STOP	REC
18	4.0	3.9	3.9
19	5.1	3.0	3.0
20	5.0	5.0	5.0
21	0	0	0
22	0	0	0
23	5.0	5.2	5.2
24	5.0	5.2	5.2
25	0	0	0
26	0	0	0
27	0	0	0
28	0	0	0
29	5.0	5.2	5.2
30	5.0	5.2	5.2
31	0	0	0
32	0	0	0
33	0	0	0
34	0	0	0
35	0	0	0
36	0	0	0
37	0	0	0
38	4.9	5.0	5.0
39	4.9	5.0	5.0
40	0	0	0
41	5.1	5.3	5.3
42	4.7	4.7	4.7
43	4.7	4.7	4.7
44	4.7	4.7	4.7
45	4.7	4.7	4.7
46	1.5	1.5	1.5
47	1.5	1.5	1.4
48	1.7	1.7	1.6
49	0	0	0
50	0	0	0
51	0	0	0
52	0	0	0
53	5.0	5.0	5.0
54	0	5.3	0
55	0	4.7	4.7
56	4.7	4.8	0
57	0	5.2	5.2
58	4.5	4.5	4.5
59	0	0	0
60	5.0	5.0	5.0
61	0	0	0
62	0	0	0
63	5.0	4.9	4.9
64	4.7	4.7	4.7
65	4.7	4.7	4.7
66	5.1	5.3	5.3

MODE PIN	PLAY	STOP	REC
67	5.1	5.3	5.3
68	0	0	4.7
69	5.1	5.3	5.3
70	5.1	5.3	5.3
71	0	0	0
72	0	0	0
73	0	0	0
74	5.1	5.3	5.3
75	5.1	5.3	5.3
76	0	0	0
77	5.3	5.3	5.3
78	0	0	0
79	2.4	2.5	2.4
80	0	0	0
81	0	0	0
82	0.4	0.9	0
83	0	0	0
84	0	0	0
85	2.5	2.6	4.3
86	2.6	2.7	4.2
87	2.6	2.6	2.6
88	2.6	2.6	2.6
89	4.3	2.6	2.6
90	2.6	2.6	2.6
91	0	0	0
92	5.1	5.2	5.2
93	5.0	0	5.0
94	0	0	0.5
95	0	0	0
96	0	0	0
97	4.8	4.8	4.8
98	5.1	5.2	5.2
99	5.1	5.2	5.2
100	4.5	4.5	4.5
IC6203 24C041			
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	5.0	5.0	5.0
6	5.0	5.0	5.0
7	0	0	0
8	5.1	5.1	5.1
IC6205 KA7533			
IN	5.0	5.0	5.0
OUT	4.8	5.0	4.8
GND	0	0	0
IC6206 KA7533			
IN	5.0	5.0	5.0
OUT	-	-	-



VRD100/VRD120HF VOLTAGE CHARTS



Main B (Cont'd)

MODE PIN	PLAY	STOP	REC
GND	0	0	0
IC6E01	LC74785		
1	0	0	0
2	2.1	2.3	2.1
3	2.4	2.5	2.4
4	0	0	0
5	0	0	0
6	2.4	2.4	2.4
7	2.5	2.5	2.5
8	5.0	5.1	4.9
9	4.7	4.6	4.6
10	5.1	5.1	4.9
11	0	0	0
12	5.1	5.1	5.1
13	1.8	2.1	2.1
14	0	0	0
15	1.8	2.1	2.1
16	5.0	5.1	5.0
17	3.0	3.3	3.2
18	3.5	3.5	3.4
19	4.4	4.4	4.2
20	5.1	5.1	5.1
21	5.1	5.1	5.0
22	5.0	5.1	4.9
23	5.0	5.1	4.9
24	5.0	5.1	5.1
IC801	SV-1274		
1	0	0	0
2	2.3	2.5	2.5
3	0	0	0
4	1.9	1.9	1.9
5	0	0	0
6	1.9	1.9	1.9
7	5.1	5.1	5.1
8	2.4	2.5	2.4
9	0	0	0
10	2.3	2.5	2.5
11	0	0	0
12	1.9	1.9	1.9
13	0	0	0
14	2.3	2.5	2.5
15	0	0	0
16	0	0	0
17	0	0	0
18	2.2	2.5	2.5
19	2.2	2.6	2.6
20	2.2	2.5	2.5
21	2.5	2.5	2.5
22	2.3	2.5	2.5
23	0	0	0

MODE PIN	PLAY	STOP	REC
24	4.4	4.3	4.3
25	4.3	4.3	4.4
26	4.4	4.3	4.4
27	4.4	4.4	0
28	4.4	4.4	4.3
29	4.3	4.4	4.4
30	4.4	4.4	4.4
31	4.4	4.4	4.4
32	4.4	4.4	4.4
33	0	0	0
34	4.7	4.7	4.7
35	4.7	4.7	4.7
36	0	0	0
37	4.4	4.4	4.3
38	4.3	4.4	4.3
39	0	0	0
40	4.2	4.3	4.3
41	0	0	0
42	4.3	4.3	4.3
43	9.0	9.0	9.0
44	4.3	4.3	4.3
45	0	0	0
46	4.2	4.3	4.3
47	0	0	0
48	4.3	3.8	4.3
49	0	0	0
50	4.3	4.3	4.3
51	0	0	0
52	4.3	4.3	4.3
53	0	0	0
54	4.3	4.3	4.3
55	9.0	9.0	9.0
56	4.3	4.3	4.7
57	0	0	0
58	4.3	4.3	4.3
59	0	0	0
60	4.3	4.3	4.3
61	0	0	0
62	5.0	5.0	5.0
63	4.4	4.5	4.3
64	3.9	4.1	4.0
Q3201	KSA733		
E	1.0	1.0	1.0
C	0	0	0
B	1.0	1.0	1.0
Q3202	KSA733		
E	0.3	0.4	0.6
C	0	0	0
B	0.3	0.4	0.4

MODE PIN	PLAY	STOP	REC
Q3203	KSC945		
E	0.4	0.4	0.4
C	5.3	5.5	5.4
B	0.3	0.3	0.3
Q3204	KSA733		
E	5.4	5.5	5.4
C	0	0.3	0
B	5.4	5.4	4.6
Q3205	KTC3203		
E	0	0	0.9
C	0	0	5.5
B	0.3	0.3	2.1
Q3206	KSA733		
E	5.4	5.5	5.5
C	5.4	0	10.0
B	4.8	0	0
Q3207	KTC3203		
E	0	0	9.2
C	0	0	0
B	0.7	0	12.0
Q3208	KTC3203		
E	0	0	4.2
C	0	0	4.9
B	0.7	0	12.0
Q3211	KSC945		
E	0	0.3	0.4
C	5.4	5.3	5.3
B	0	2.0	4.0
Q6201	KSC945		
E	1.7	2.1	2.1
C	5.1	5.1	5.1
B	1.3	1.4	1.3
Q6202	KSA733		
E	2.5	2.9	2.8
C	0	0	0
B	1.8	2.2	2.1
Q6203	KSA733		
E	0	0	0
C	0	0	0.7
B	0.7	0.7	0.7
Q701	KSA733		
E	5.4	5.4	5.4
C	-26	-26	32.0
B	5.2	5.2	5.2
Q702	KSA733		
E	5.4	5.4	5.4
C	-26	-26	32.0
B	5.2	5.2	5.2



VRD100/VRD120HF VOLTAGE CHARTS



Function/Timer

MODE PIN	PLAY	STOP	REC
Q703	KSA733		
E	5.4	5.4	5.4
C	-26	-26	32.0
B	5.2	5.2	5.2
Q704	KSA733		
E	5.4	5.4	5.4
C	-26	-26	32
B	5.2	5.2	5.2
Q705	KSA733		
E	5.4	5.4	5.4
C	32.0	32.0	32.0
B	5.2	5.2	5.2
Q706	KSA733		
E	5.4	5.4	5.4
C	32.0	32.0	32.0
B	5.2	5.2	5.2
Q707	KSA733		
E	5.4	5.4	5.4
C	32.0	32.0	32.0
B	5.2	5.2	5.2
Q708	KSA733		
E	5.4	5.4	5.4
C	32.0	32.0	32.0
B	5.2	5.2	5.2
Q709	KSA733		
E	5.4	5.4	5.4
C	32.0	32.0	32.0
B	5.2	5.2	5.2
Q710	KSA733		
E	5.4	5.4	5.4
C	32.0	32.0	32.0
B	5.2	5.2	5.2



TIMING CHARTS SUBINDEX

Program S/W Timing Chart

Tape Loading

Tape Unloading

Slot Out

Slot In

Power Off (Unloading END)

C > D (RPS > Play)

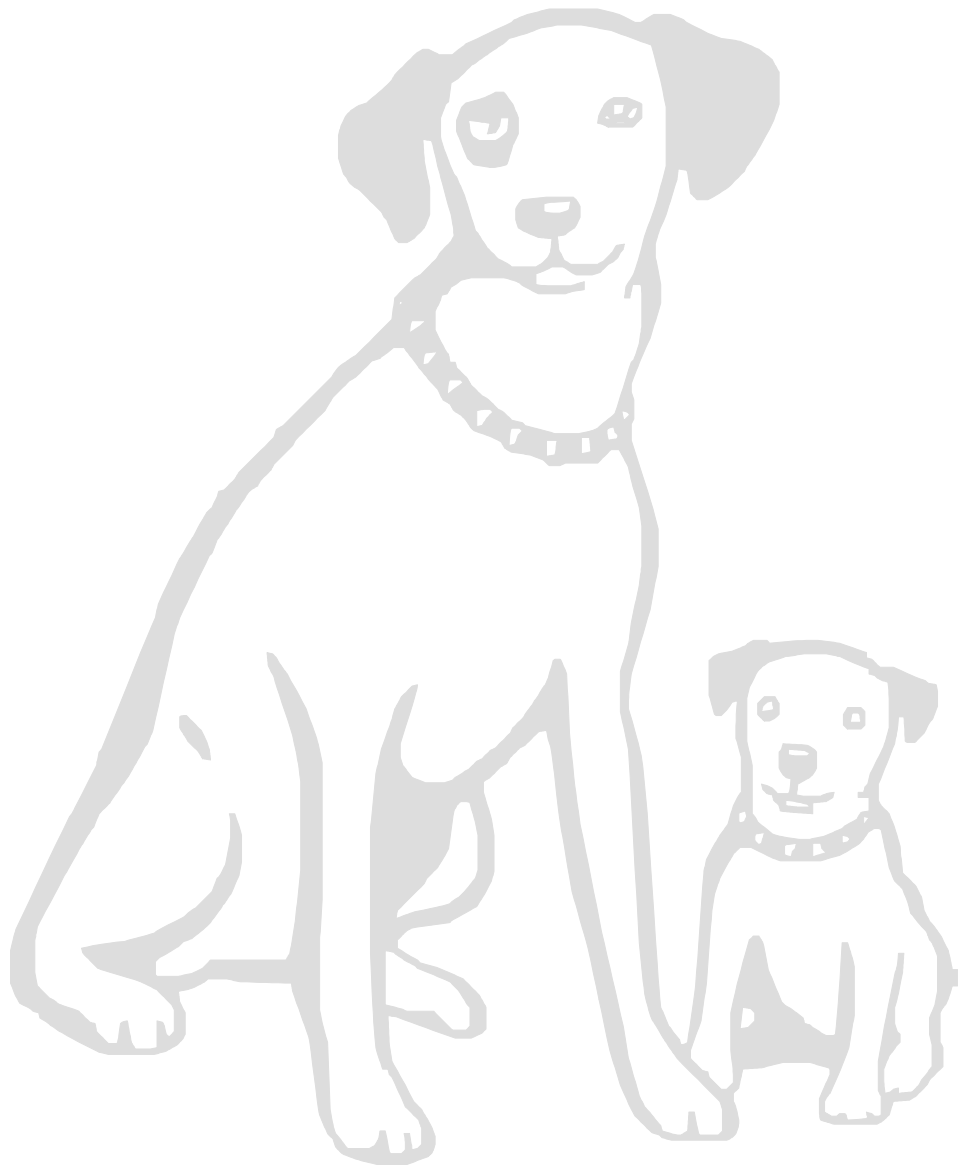
C, D > E (RPS/PB > STOP1)

E > D (STOP > PLAY)

D > C (PLAY > RPS)

FF/REW > STOP2 (FF/REW Speed $\frac{3}{4}$ LP x 4)

FF/REW > STOP2 (FF/REW Speed $\frac{1}{2}$ LP x 4, Start/End Sensor ON)

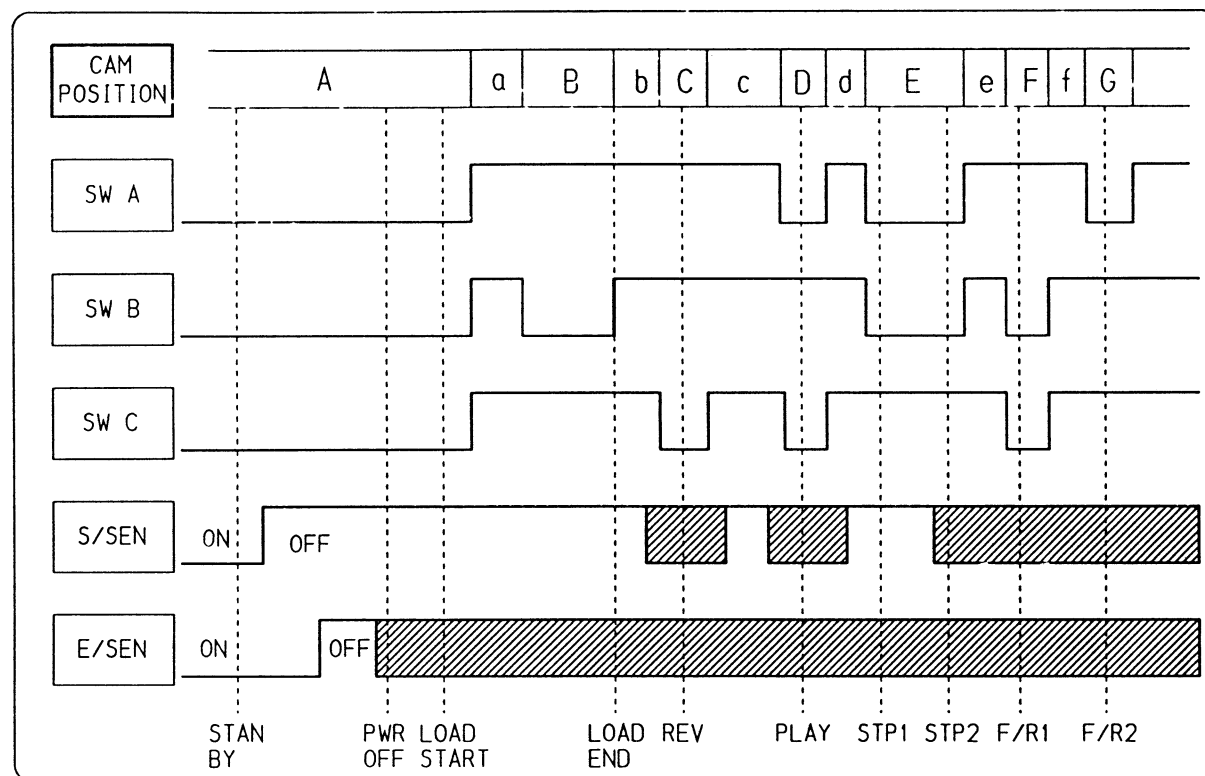


VRD100/VRD120HF

TIMING CHARTS



Program S/W Timing Chart



START/END SENSOR : ON-"L",OFF-"H"



: DON'T CARE

POSITION	CAM S/W			START SEN	ACTION MODE
	A	B	C		
STAND BY	0	0	0	0	Eject
POWER OFF	0	0	0	1	Unload POWER OFF
LOADING START	0	0	0	1	(Tape loading start point)
LOADING END	1	0→1	1	1	(Tape loading end point)
REV	1	1	0	X	Reverse Picture Search,Reverse SLOW
PLAY	0	1	0	X	Play,Rec.F-PS,Still,SLOW,F-ADV
STOP1	0	0	1	1	Stop(Play position 5 Min.over)
STOP2	0	0	1	X	(MAIN Break ON MODE)
FF/REV1	1	0	0	X	High speed Rew,Low speed FF
FF/REV2	0	1	1	X	High speed FF,Low speed Rew

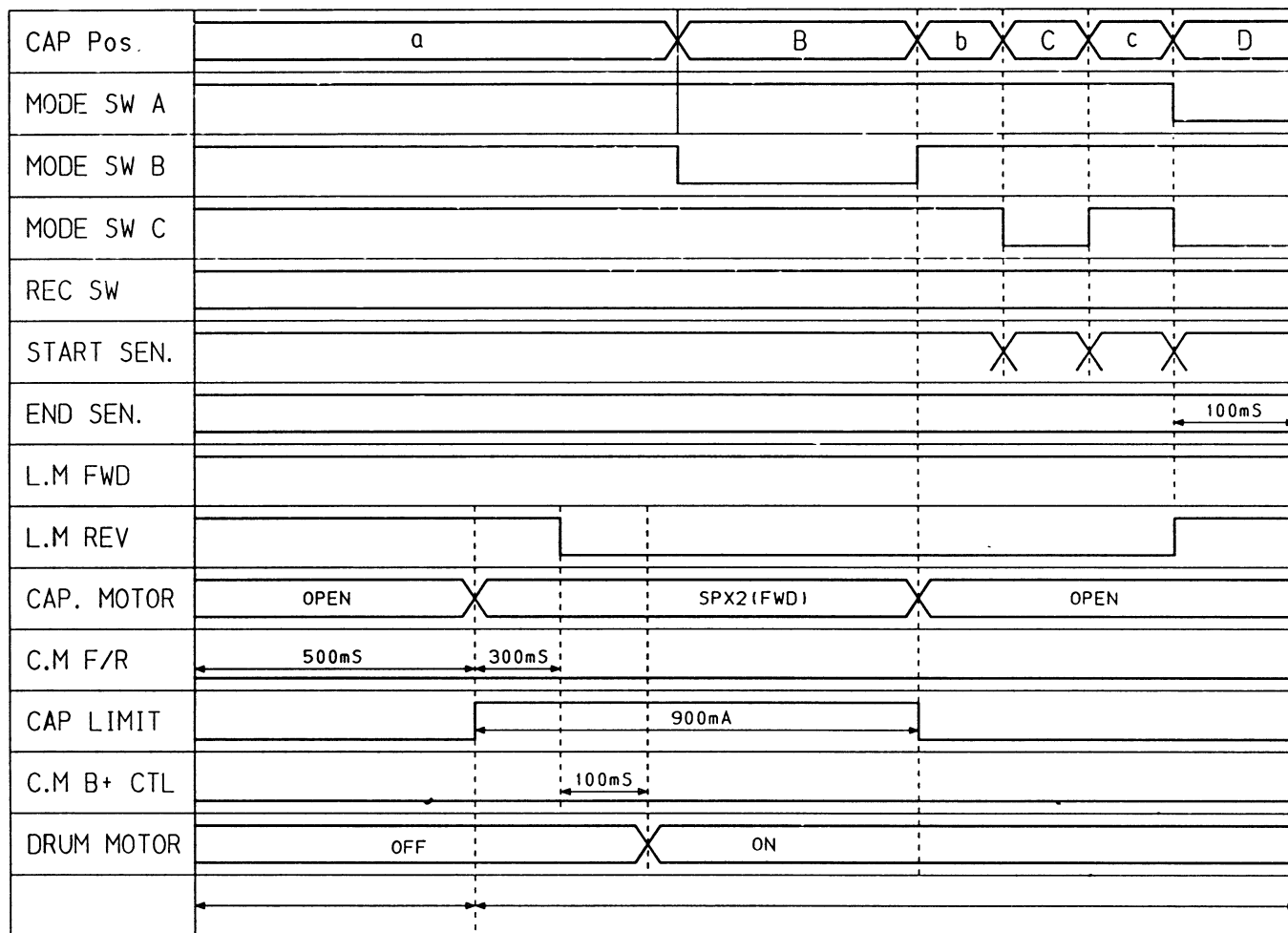
X : DON'T CARE



VRD100/VRD120HF TIMING CHARTS



Tape Loading

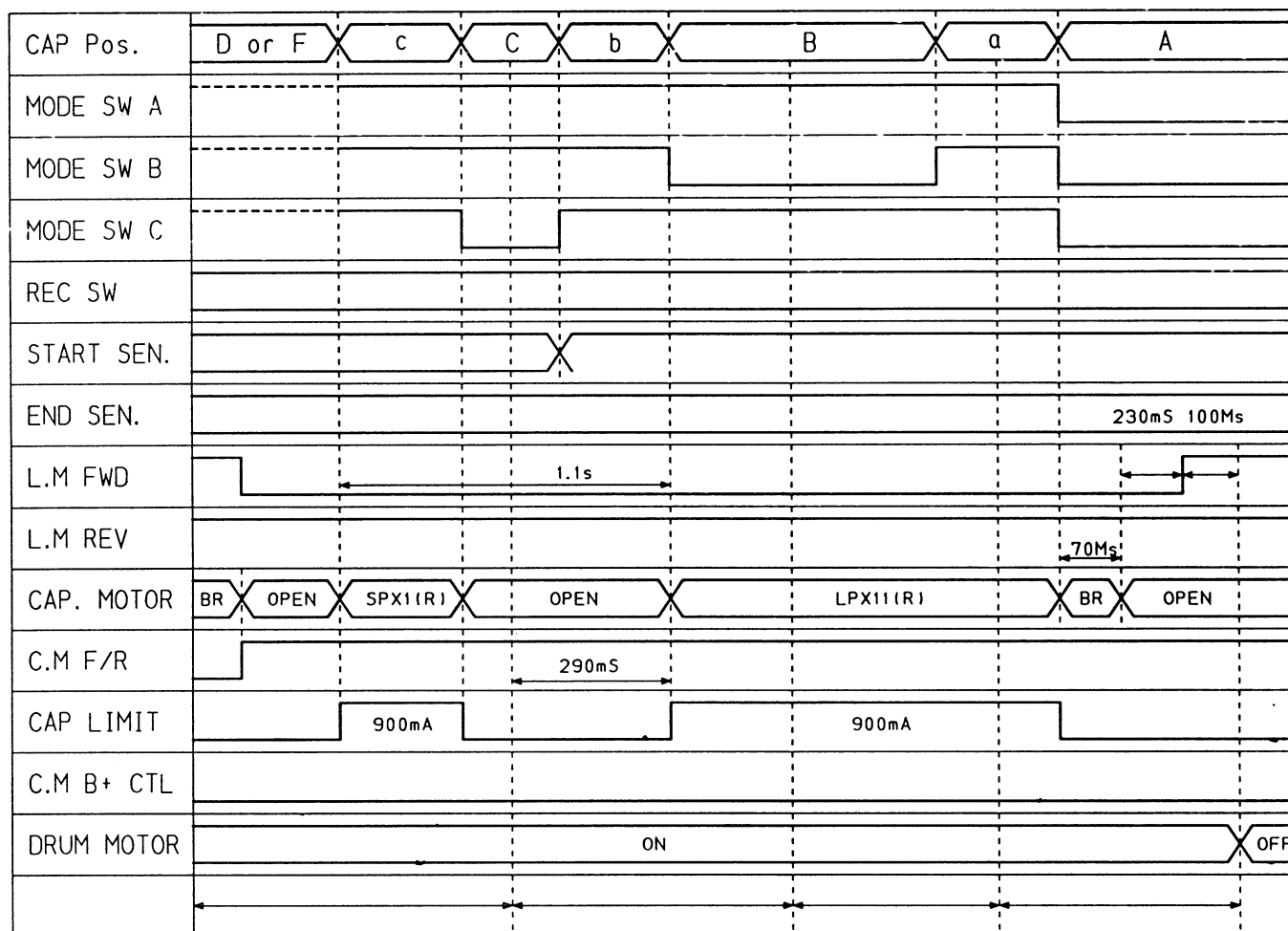


VRD100/VRD120HF

TIMING CHARTS



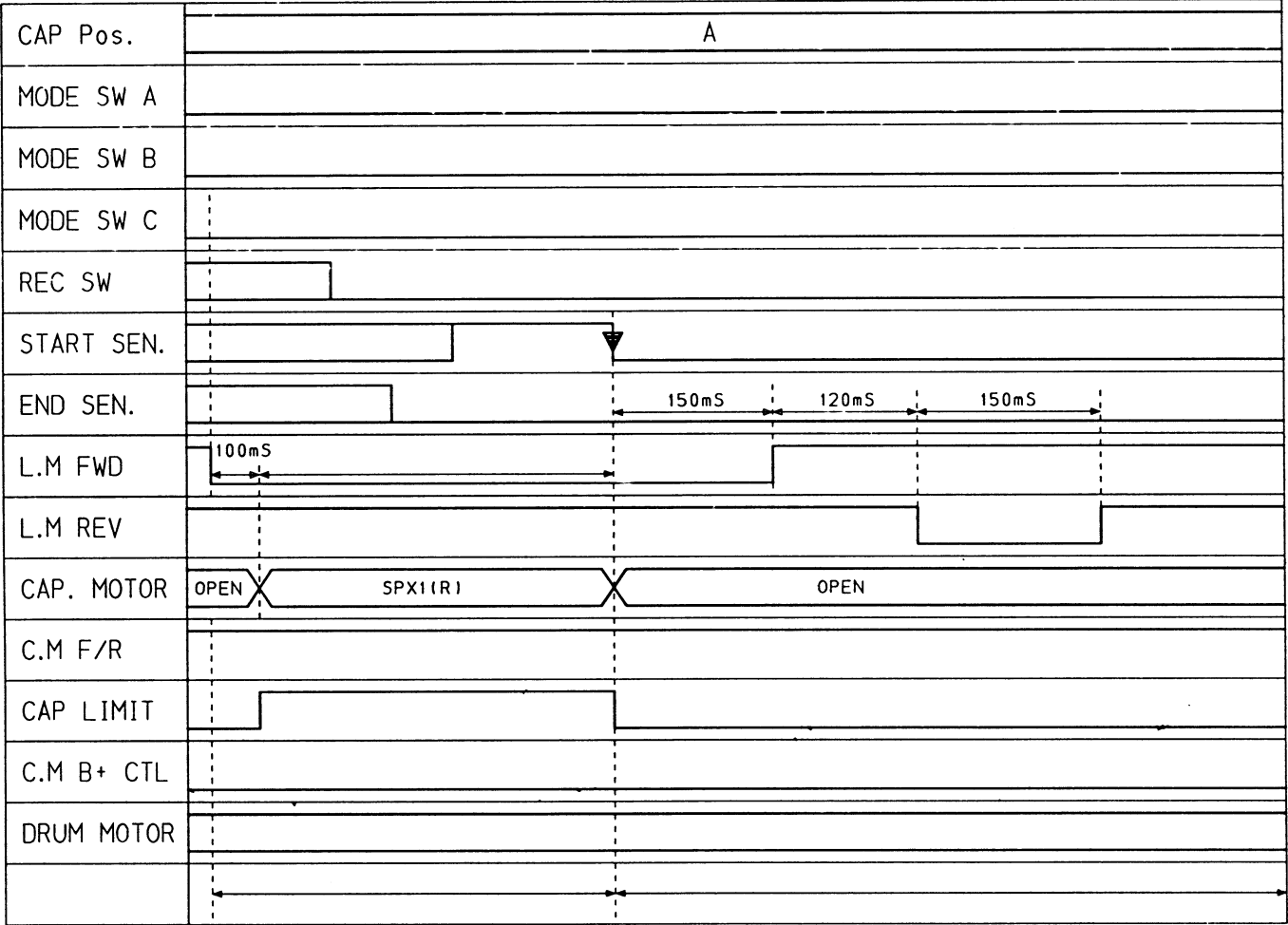
Tape Unloading



VRD100/VRD120HF
TIMING CHARTS



Slot Out

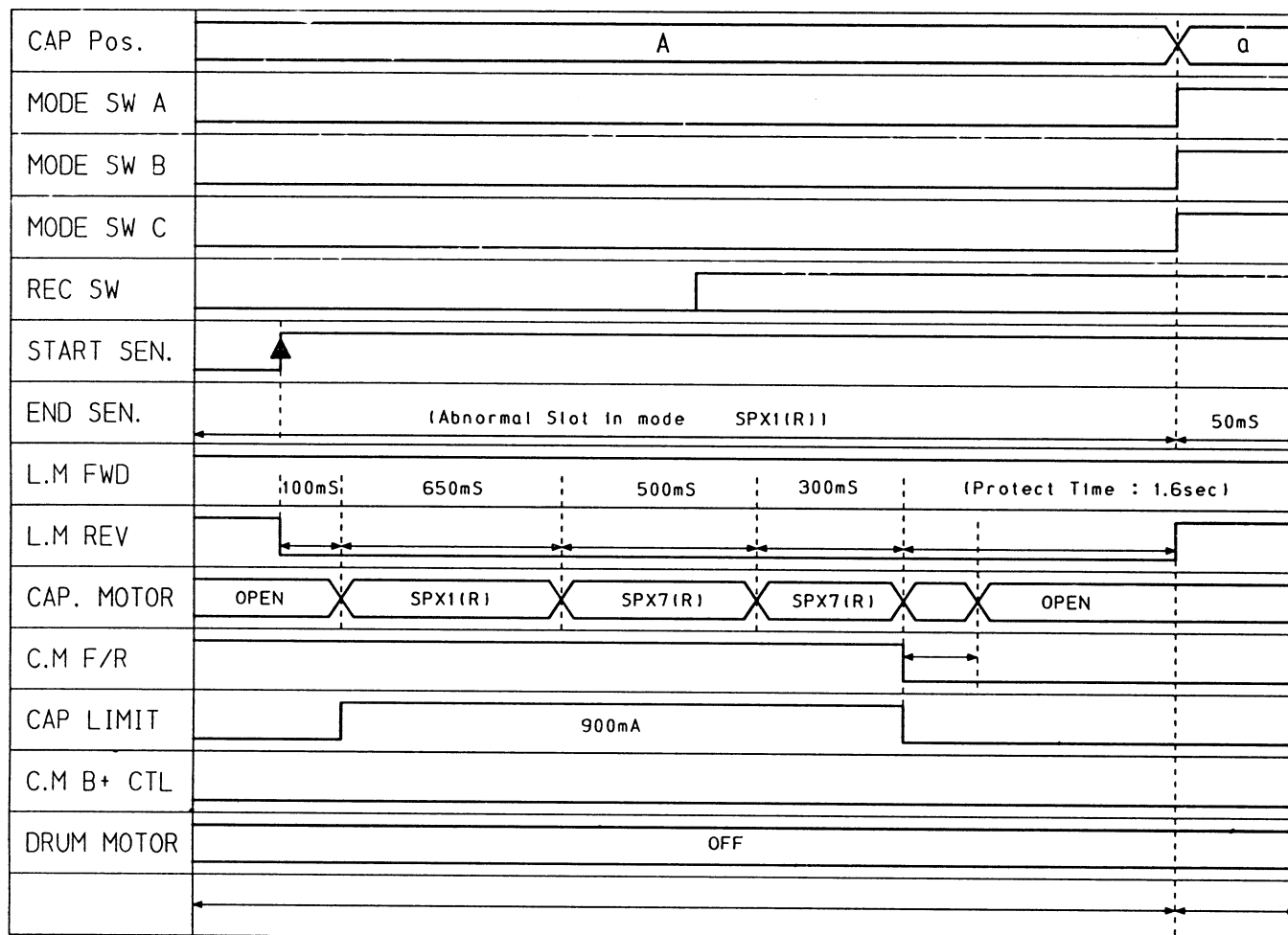


VRD100/VRD120HF TIMING CHARTS



Slot In

<Slot In>



VRD100/VRD120HF
TIMING CHARTS



Power Off (Unloading END)

<Power OFF (Unloading End)>

CAP Pos.	A	
MODE SW A		
MODE SW B		
MODE SW C		
REC SW		
START SEN.		
END SEN.		
L.M FWD		
L.M REV	1.0sec	
CAP. MOTOR	LPX1 (R)	OPEN
C.M F/R		
CAP LIMIT	900mA	
C.M B+ CTL		
DRUM MOTOR	OFF	



VRD100/VRD120HF TIMING CHARTS



C > D (RPS > Play)

<C → D (RPS → PLAY)>

CAP Pos.	C	c	D
MODE SW A			
MODE SW B			
MODE SW C			
REC SW			
START SEN.			
END SEN.			
L.M FWD		300mS 50mS 100mS 200mS	
L.M REV			100mS
CAP. MOTOR	BR	OPEN EPX3 (F) BR	OPEN
C.M F/R			
CAP LIMIT		900mA	
C.M B+ CTL			
DRUM MOTOR		ON	



VRD100/VRD120HF TIMING CHARTS



C, D > E (RPS/PB > STOP1)

<C, D → E (RPS/PB → STOP1)>

CAP Pos.	C or D		X	E	
MODE SW A					
MODE SW B					
MODE SW C					
REC SW					
START SEN.					
END SEN.				50mS	100mS
L.M FWD					
L.M REV				100mS	
CAP. MOTOR	BR	X		OPEN	
C.M F/R					
CAP LIMIT					
C.M B+ CTL					
DRUM MOTOR				ON	



VRD100/VRD120HF TIMING CHARTS



E > D (STOP > PLAY)

CAP Pos.	E	d	D
MODE SW A			
MODE SW B			
MODE SW C			
REC SW			
START SEN.			
END SEN.			
L.M FWD			
L.M REV			
CAP. MOTOR		OPEN	EPX2 (R) BR
C.M F/R			
CAP LIMIT			900mA 900mA
C.M B+ CTL			
DRUM MOTOR		ON	

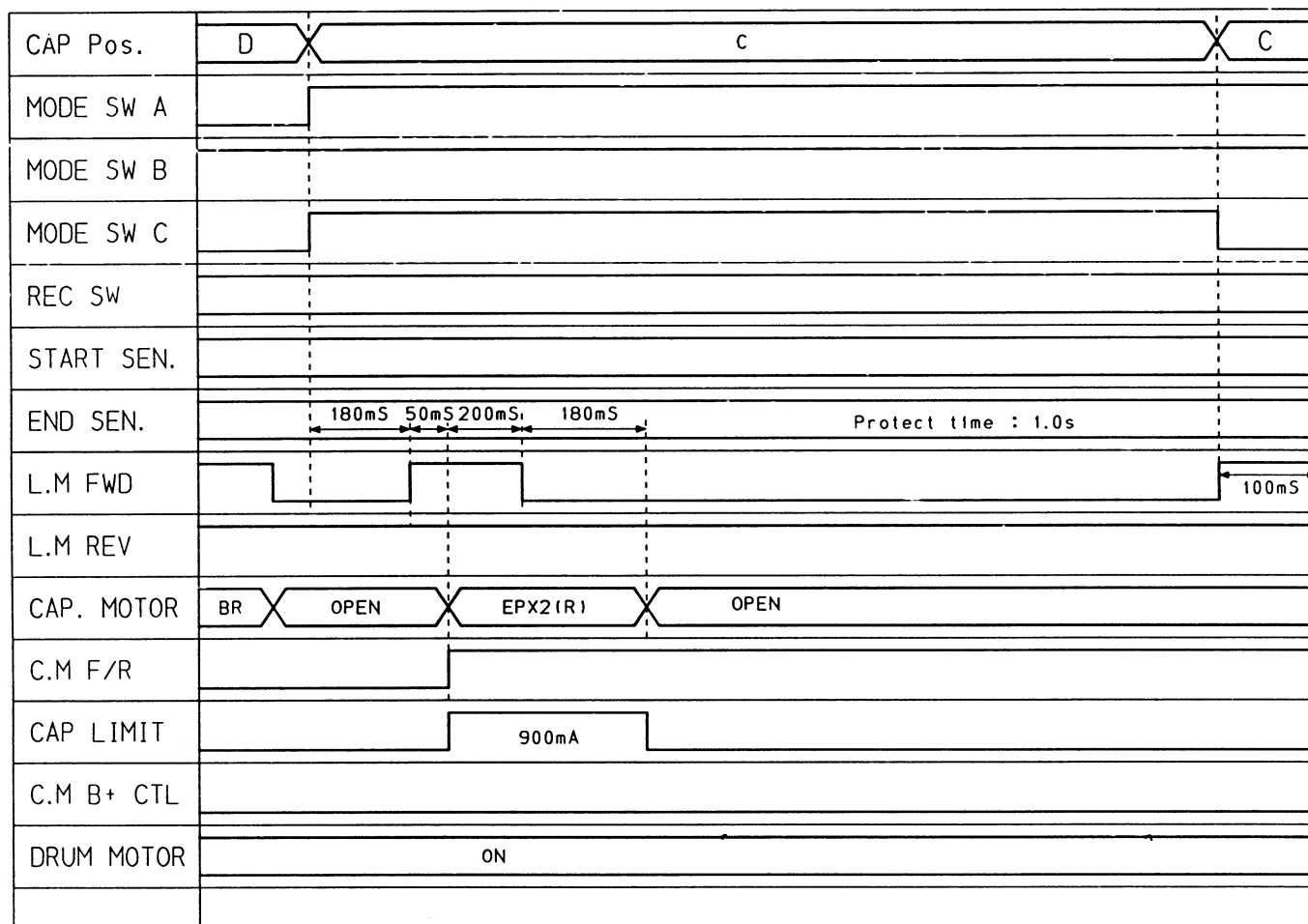


VRD100/VRD120HF

TIMING CHARTS



D > C (PLAY > RPS)



VRD100/VRD120HF TIMING CHARTS



FF/REW > STOP2 (FF/REW Speed $\geq$ LP x 4)

CAP Pos.	F or G	e	E
MODE SW A			
MODE SW B			
MODE SW C			
REC SW			
START SEN.			
END SEN.			
L.M FWD		70mS	
L.M REV			Wait for Tape stop : max 3.5sec
CAP. MOTOR	FF/REW		OPENIC-Cassette : BR1
C.M F/R			
CAP LIMIT	900mA		
C.M B+ CTL			
DRUM MOTOR	ON		

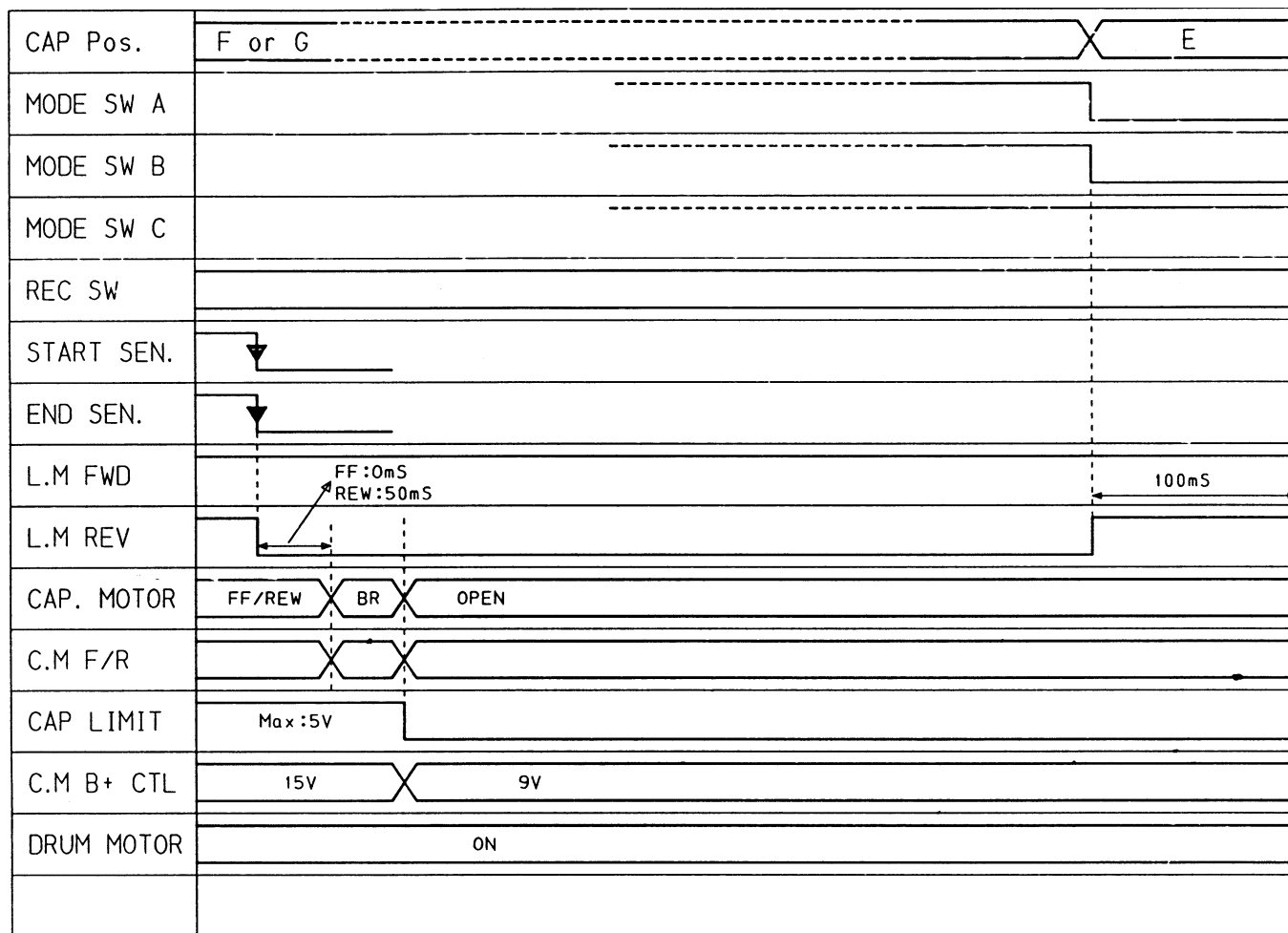


VRD100/VRD120HF

TIMING CHARTS



FF/REW > STOP2 (FF/REW Speed $\leq$ LP x 4, Start/End Sensor ON)



REPLACEMENT PARTS

BEFORE REPLACING PARTS, READ THE FOLLOWING:

Approved Substitute Stock Numbers - Before ordering stock numbers in the part list, look for an approved substitute stock number in the current Price Schedule. This will minimize your service time and avoid ordering parts you already have in stock.

PRODUCT SAFETY NOTE: Components marked with a critical safety symbol have special characteristics important to safety. Before replacing any of these components, carefully read the **PRODUCT SAFETY NOTICE** in the basic service data. Do not degrade the safety of the set through improper servicing. Although assemblies as a whole may not be marked with a critical safety symbol, replacement of assemblies with other assemblies not approved may result in a safety hazard.

 Critical Safety Symbol

● Not Eligible For Warranty

Warranty Status of Assemblies and Parts - All assemblies and components shown in this part list are eligible for warranty exchange or replacement except those with a dot shown to the left of the Description. Assemblies and components with a dot to the left of the Description are NOT eligible for warranty exchange or replacement.

Warranty replacement of cabinet parts requires the approval of a Thomson Consumer Electronics Field Service Manager.

Warranty Status and Specifications of assemblies and components are subject to change without notice. Consult the TCE Parts Pricing Microfiche for the latest warranty status information.

@NOTE: When ordering components that are listed more than once in this part list, always adhere to the serial number application guidelines given in the description column. If a serial number application guideline is not given, always select the component with a value, rating, other specification or identification marking(s) that match those of the corresponding component in the instrument you are servicing.

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
VRD100			
ELECTRICAL COMPONENTS (A)			
BD1SF1	218952	AC27-92001M	COIL
BD1SF2	218952	AC27-92001M	COIL
BD1SS1	222860	3301-000297	BEAD
BD1SS2	218952	AC27-92001M	COIL
BD1SS5	218952	AC27-92001M	COIL
C1P101	245687	2401-001730	CAP LYTC 10UF M 50V
C1P102	245704	2401-002144	CAP LYTC 47UF M 16V
C1P103	245688	2401-002036	CAP LYTC 1UF M 50V
C1P104	245689	2401-002075	CAP LYTC 4.7UF M 50V
C1P105	245704	2401-002144	CAP LYTC 47UF M 16V
C1P106	245704	2401-002144	CAP LYTC 47UF M 16V
C1P108	245689	2401-002075	CAP LYTC 4.7UF M 50V
C1P109	245704	2401-002144	CAP LYTC 47UF M 16V
C1P112	245689	2401-002075	CAP LYTC 4.7UF M 50V
C1P113	251305	2401-001573	CAP LYTC 47UF M 50V
C1P202	245704	2401-002144	CAP LYTC 47UF M 16V
C1P204	245689	2401-002075	CAP LYTC 4.7UF M 50V
C1P205	245704	2401-002144	CAP LYTC 47UF M 16V
C1P206	245704	2401-002144	CAP LYTC 47UF M 16V
C1P212	245689	2401-002075	CAP LYTC 4.7UF M 50V
C1SD11	251310	2401-003380	CAP LYTC 82UF M 200V
C1SR11	245690	2401-001235	CAP LYTC 4.7UF M 250V
C1SR12	194339	2401-000905	CAP LYTC 22UF 16V
C1SR13	251306	2301-000180	CAP POLY .018UF 100V
C1SR14	219012	2301-000417	CAP POLY .024UF J 50V
C1SR15	245691	2301-000423	CAP POLY 3.3NF J 100V
C1SR16	240732	2201-000930	CAPCD 22PF 500V

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
C1SS01	246096	2305-001021	CAP .1UF M 275V
C1SS02	164882	2201000795	CAPCD .01UF K 400V
C1SS03	246111	2201-000812	CAPCD 0022UF M 400V
C1SS04	215400	2201-000916	CAPCD 100PF K 400V
C1SS31	157115	2401000385	CAP LYTC 10UF 100V
C1SS32	245692	2401-001126	CAP LYTC 330UF M 25V
C1SS33	201162	2401002162	CAP LYTC 1000UF M 25V
C1SS34	245692	2401-001126	CAP LYTC 330UF M 25V
C1SS35	251311	2401-001992	CAP LYTC 2200UF M 10V
C1SS36	245693	2401-003059	CAP LYTC 1000UF M 16V
C1SS37	251305	2401-001573	CAP LYTC 47UF M 50V
C1SS38	227898	2401001479	CAP LYTC 47UF M 10V
C1SS39	186754	2301000129	CAP POLY 100NF J 50V
C1SS40	151500	2301000383	CAP POLY .01UF J 50V
C1SS63	201162	2401002162	CAP LYTC 1000UF M 25V
C1SS64	245692	2401-001126	CAP LYTC 330UF M 25V
C3101	245694	2203000476	CAPCC 1UF Z 16V
C3102	152267	2401-001507	CAP LYTC 47UF 16V
C3103	222780	2203-000192	CAPCC .1UF Z 50V
C3104	245696	2203-001721	CAPCC 360PF J 50V
C3105	193586	2401-001915	CAP LYTC 1UF 50V
C3106	251280	2203-000408	CAPCC 180PF J 50V
C3107	251281	2203-000555	CAPCC 20PF J 50V
C3109	243245	2401-000922	CAP LYTC 22UF M 16V
C3110	222780	2203-000192	CAPCC .1UF Z 50V
C3111	197059	2203-000260	CAPCC .01UF 50V
C3112	245694	2203000476	CAPCC 1UF Z 16V
C3113	214962	2203-000609	CAPCC .022UF K 50V
C3114	245697	2401-000407	CAP LYTC 10UF M 16V
C3115	193586	2401-001915	CAP LYTC 1UF 50V
C3116	193586	2401-001915	CAP LYTC 1UF 50V

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
C3117	245694	2203000476	CAPCC 1UF Z 16V
C3118	245700	2401-000598	CAP LYTC 1UF M 50V
C3119	186999	2202000797	CAPCD .01UF 30% 16V
C3120	186999	2202000797	CAPCD .01UF 30% 16V
C3121	222780	2203-000192	CAPCC .1UF Z 50V
C3122	147624	2401-001545	CAP LYTC 47UF 25V
C3123	245701	2202-002037	CAPCC .1UF M 50V
C3124	186763	2401002165	CAP LYTC 100UF M 16V
C3125	245694	2203000476	CAPCC 1UF Z 16V
C3126	245694	2203000476	CAPCC 1UF Z 16V
C3127	245702	2203-000989	CAPCC 47NF K 50V
C3129	245694	2203000476	CAPCC 1UF Z 16V
C3130	197059	2203-000260	CAPCC .01UF 50V
C3131	245694	2203000476	CAPCC 1UF Z 16V
C3132	245703	2401-000414	CAP LYTC 10UF M 16V
C3133	222780	2203-000192	CAPCC .1UF Z 50V
C3134	245702	2203-000989	CAPCC 47NF K 50V
C3135	245702	2203-000989	CAPCC 47NF K 50V
C3136	222780	2203-000192	CAPCC .1UF Z 50V
C3137	147624	2401-001545	CAP LYTC 47UF 25V
C3138	245705	2401-000913	CAP LYTC 22UF M 16V
C3139	245689	2401-002075	CAP LYTC 4.7UF M 50V
C3141	222780	2203-000192	CAPCC .1UF Z 50V
C3142	147624	2401-001545	CAP LYTC 47UF 25V
C3143	245836	2203-001724	CAPCC 4.7UF 16V
C3144	229155	2203-001214	CAPCC .0082UF K 50V
C3145	245707	2301-001014	CAPCF 6.8NF J 50V
C3146	197059	2203-000260	CAPCC .01UF 50V
C3147	222728	2007-000029	RES CCF 1/10W 5% 0R
C3149	251282	2203-001077	CAPCC 56PF J 50V
C3150	245704	2401-002144	CAP LYTC 47UF M 16V
C3151	197059	2203-000260	CAPCC .01UF 50V
C3152	245708	2301-000253	CAPCF 39NF J 100V
C3153	222780	2203000192	CAPCC .1UF Z 50V
C3156	197059	2203-000260	CAPCC .01UF 50V
C3157	245687	2401-001730	CAP LYTC 10UF M 50V
C3158	251283	2203-000142	CAPCC 1500PF K 50V
C3159	215181	2203-001665	CAPCC .560UF K 50V
C3160	242991	2401-002299	CAP LYTC 4.7UF M 50V
C3161	245694	2203000476	CAPCC 1UF Z 16V
C3162	197059	2203-000260	CAPCC .01UF 50V
C3163	197059	2203-000260	CAPCC .01UF 50V
C3164	197059	2203-000260	CAPCC .01UF 50V
C3165	186999	2202000797	CAPCD .01UF 30% 16V
C3166	245701	2202-002037	CAPCC .1UF M 50V
C3168	222780	2203-000192	CAPCC .1UF Z 50V
C3169	245687	2401-001730	CAP LYTC 10UF M 50V
C3171	197059	2203-000260	CAPCC .01UF 50V
C3174	197059	2203-000260	CAPCC .01UF 50V
C3175	197059	2203-000260	CAPCC .01UF 50V
C3301	245700	2401-000598	CAP LYTC 1UF M 50V
C3302	245701	2202-002037	CAPCC .1UF M 50V
C3303	245701	2202-002037	CAPCC .1UF M 50V

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
C3304	245701	2202-002037	CAPCC .1UF M 50V
C3305	186999	2202000797	CAPCD .01UF 30% 16V
C3306	245694	2203000476	CAPCC 1UF Z 16V
C3307	147624	2401-001545	CAP LYTC 47UF 25V
C3308	245760	2202-000173	CAPCD .001UF K 50V
C3309	245701	2202-002037	CAPCC .1UF M 50V
C3310	147624	2401-001545	CAP LYTC 47UF 25V
C3312	249170	2203-000170	CAPCC .0018UF K 50V
C3313	230477	2203-001579	CAPCC .015UF K 50V
C3314	230477	2203-001579	CAPCC .015UF K 50V
C3317	186999	2202000797	CAPCD .01UF 30% 16V
C3318	186763	2401002165	CAP LYTC 100UF M 16V
C6101	222780	2203-000192	CAPCC .1UF Z 50V
C6113	247351	2202-002055	CAPCC .047UF +80-2% Y5V 50V
C6114	197059	2203-000260	CAPCC .01UF 50V
C6117	251284	2203-000634	CAPCC 22PF J 50V
C6118	251284	2203-000634	CAPCC 22PF J 50V
C6122	245701	2202-002037	CAPCC .1UF M 50V
C6124	242991	2401-002299	CAP LYTC 4.7UF M 50V
C6125	245701	2202-002037	CAPCC .1UF M 50V
C6126	147624	2401-001545	CAP LYTC 47UF 25V
C6127	186999	2202000797	CAPCD .01UF 30% 16V
C6128	147624	2401-001545	CAP LYTC 47UF 25V
C6129	197059	2203-000260	CAPCC .01UF 50V
C6130	186763	2401002165	CAP LYTC 100UF M 16V
C6132	251285	2203-000239	CAPCC 100PF J 50V
C6133	245701	2202-002037	CAPCC .1UF M 50V
C6134	214943	2203-000938	CAPCC 470PF K 50V
C6136	197059	2203-000260	CAPCC .01UF 50V
C6137	197059	2203-000260	CAPCC .01UF 50V
C6138	245701	2202-002037	CAPCC .1UF M 50V
C6140	245713	2203-000802	CAPCC .033UF K 50V
C6141	245702	2203-000989	CAPCC .047UF K 50V
C6147	232586	2203-001143	CAPCC .068UF K 50V
C6148	232586	2203-001143	CAPCC .068UF K 50V
C6150	147624	2401-001545	CAP LYTC 47UF 25V
C6151	197059	2203-000260	CAPCC .01UF 50V
C6155	197059	2203-000260	CAPCC .01UF 50V
C6156	147624	2401-001545	CAP LYTC 47UF 25V
C6157	147624	2401-001545	CAP LYTC 47UF 25V
C6158	197059	2203-000260	CAPCC .01UF 50V
C6159	186999	2202000797	CAPCD .01UF 30% 16V
C6160	147624	2401-001545	CAP LYTC 47UF 25V
C6161	245701	2202-002037	CAPCC .1UF M 50V
C6166	186999	2202000797	CAPCD .01UF 30% 16V
C6167	245709	2203-000495	CAPCC .0022UF K 50V
C6CM01	147624	2401-001545	CAP LYTC 47UF 25V
C6CM02	186999	2202000797	CAPCD .01UF 30% 16V
C6CM03	233750	2203-000716	CAPCC .0033UF K 50V
C6CM04	245701	2202-002037	CAPCC .1UF M 50V
C6CM05	186999	2202000797	CAPCD .01UF 30% 16V
C6CM06	231998	2203-000727	CAPCC 3900PF K 50V

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
C6CM07	222780	2203-000192	CAPCC .1UF Z 50V	D1SR32	240679	0401-000101	DIODE
C6CM08	197059	2203-000260	CAPCC .01UF 50V	D1SS01	245722	0402-001196	DIODE RECTIFIER 600V
C6CM09	186999	2202000797	CAPCD .01UF 30% 16V	D1SS02	245722	0402-001196	DIODE RECTIFIER 600V
C6CM11	197059	2203-000260	CAPCC .01UF 50V	D1SS03	245722	0402-001196	DIODE RECTIFIER 600V
C6CM12	222780	2203-000192	CAPCC .1UF Z 50V	D1SS04	245722	0402-001196	DIODE RECTIFIER 600V
C6CM13	222780	2203-000192	CAPCC .1UF Z 50V	D1SS11	251307	0402-000012	DIODE
C6CM14	222780	2203-000192	CAPCC .1UF Z 50V	D1SS31	245724	0402-001195	DIODE RECTIFIER 400V
C6CM15	187762	2401001931	CAP LYTC .22UF 50V	D1SS32	245725	0402-001194	DIODE RECTIFIER 200V
C6CM16	197059	2203-000260	CAPCC .01UF 50V	D1SS33	232353	404-000128	DIODE
C6CM17	197059	2203-000260	CAPCC .01UF 50V	D1SS34	245724	0402-001195	DIODE RECTIFIER 400V
C6CM18	197059	2203-000260	CAPCC .01UF 50V	D1SS62	245725	0402-001194	DIODE RECTIFIER 200V
C6CM19	222780	2203-000192	CAPCC .1UF Z 50V	D3101	240679	0401-000101	DIODE
C6CM20	248691	2203-000858	CAPCC 39PF J NPO 50V	D3301	240679	0401-000101	DIODE
C6CM21	245700	2401-000598	CAP LYTC 1UF M 50V	D3302	240679	0401-000101	DIODE
C6CM22	245710	2203-000444	CAPCC .001UF K 50V	D6101	155276	0402-000127	DIODE
C6CM23	245847	2401-000661	CAP LYTC 2.2UF M 50V	D6104	240679	0401-000101	DIODE
C6CM24	222780	2203-000192	CAPCC .1UF Z 50V	D701	155276	0402-000127	DIODE
C6CM25	245697	2401-000407	CAP LYTC 10UF M 16V	F1SD01	245727	3601-001122	FUSE 250V
C701	186999	2202000797	CAPCD .01UF 30% 16V	FC1SS1	N/S/P	3602-000103	FUSE CLIP
C702	186763	2401002165	CAP LYTC 100UF M 16V	FC1SS2	N/S/P	3602-000103	FUSE CLIP
CN101	251312	3711-000666	CONNECTOR 12P	FL3101	245728	AC27-80100C	COIL
CN1SS1	240691	3711-000178	CONNECTOR	GP6101	N/S/P	AC61-30181A	PLATE GROUND
CN3101	233763	3708-000395	CONNECTOR	HSD33A	N/S/P	AC62-32001B	HEATSINK
CN3102	229171	3711-002445	CONNECTOR	HSQ11A	N/S/P	AH62-30122A	HEATSINK
CN3103	245714	3708-001302	CONNECTOR	IC1SS1	245729	0604-001028	IC PHOTO COUPLER
CN313B	245715	3809-001110	CABLE FLAT 7P	IC1SS2	240682	AC14-12006D	IC
CN5101	251313	3711-000596	CONNECTOR 10P	IC3101	248650	1204-001644	IC VIDEO PROCESS LA71069M
CN511B	N/S/P	AC39-00013A	CONNECTOR ASY	IC3301	251321	AC14-12015S	IC
CN6101	245716	AC39-20817S	CONNECTOR ASSEMBLY	IC6101	251286	AC09-00164A	IC
CN6102	251312	3711-000666	CONNECTOR 12P	IC6102	245732	1003-001162	IC MOTOR DRIVER KA3082
CN6104	245717	3711-003749	CONNECTOR 8P	IC6CM1	245849	1204-001331	IC SIGNAL PROCESSOR
CN6105	245718	3708-001163	CONNECTOR 5P	L1P201	227549	2701-000002	COIL
CN612B	N/S/P	AC39-00014A	CONNECTOR ASY	L1SS01	246107	AC27-92001Q	COIL LINE FILTER
CN615B	245719	3809-001112	CABLE FLAT 5P	L1SS31	234055	AC27-12001N	COIL
CN701	251372	3711-004320	CONNECTOR 27P	L1SS32	234055	AC27-12001N	COIL
D1P101	240679	0401-000101	DIODE	L1SS61	234055	AC27-12001N	COIL
D1P102	155276	0402-000127	DIODE	L3101	227549	2701-000002	COIL
D1P103	155276	0402-000127	DIODE	L3102	186692	2702000108	INDUCTOR
D1P104	155276	0402-000127	DIODE	L3103	186692	2702000108	INDUCTOR
D1P105	155276	0402-000127	DIODE	L3104	227549	2701-000002	COIL
D1P108	240679	0401-000101	DIODE	L3105	227549	2701-000002	COIL
D1P109	240679	0401-000101	DIODE	L3106	196197	2702-000120	COIL
D1P201	240679	0401-000101	DIODE	L3107	186692	2702000108	INDUCTOR
D1P202	155276	0402-000127	DIODE	L3108	251308	2702-000163	COIL 470UH
D1P203	155276	0402-000127	DIODE	L3301	227549	2701-000002	COIL
D1P204	155276	0402-000127	DIODE	L3303	227549	2701-000002	COIL
D1P205	155276	0402-000127	DIODE	L6101	227549	2701-000002	COIL
D1P209	240679	0401-000101	DIODE	L6CM01	227549	2701-000002	COIL
D1SD11	240679	0401-000101	DIODE	L6CM02	240686	2701-000195	INDUCTOR
D1SD31	240679	0401-000101	DIODE	L701	227549	2701-000002	COIL
D1SD32	240679	0401-000101	DIODE	LD6101	245738	0601-000517	DIODE LED
D1SR11	240679	0401-000101	DIODE	LD611A	247767	AC61-21009A	HOLDER LED
D1SR31	240679	0401-000101	DIODE	PT1SD1	251322	AC26-00007A	TRANSFORMER

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
PT6101	251323	0604-001206	SENSOR PHOTO	R1SD32	175412	2001000780	RES CF 1/8W 5% 470R
PT6102	251323	0604-001206	SENSOR PHOTO	R1SF01	246109	2006-000262	RES 2W 10% 27R
Q1P101	196201	501000616	TRANSISTOR	R1SR01	203072	2002-000320	RES COMP 1/2W 10% 1.8M
Q1P102	196201	501000616	TRANSISTOR	R1SR11	251324	2006-000259	RES CEMENT 2W 10% 0.47R
Q1P104	196201	501000616	TRANSISTOR	R1SR12	181366	2003000314	RES MF 2W 5% 47R
Q1P107	196201	501000616	TRANSISTOR	R1SR13	181366	2003000314	RES MF 2W 5% 47R
Q1P108	186544	0504-000142	TRANSISTOR	R1SR14	175045	2001000003	RES CF 1/8W 5% 330R
Q1P109	186642	0501-000398	TRANSISTOR	R1SR15	175413	2001000734	RES CF 1/8W 5% 4.7K
Q1P201	196201	501000616	TRANSISTOR	R1SS11	182367	2006000273	RES CEMENT 2W 5% 27K
Q1P202	196201	501000616	TRANSISTOR	R1SS13	178621	2003000148	RES MF 2W 5% 100R
Q1P207	196201	501000616	TRANSISTOR	R1SS31	155045	2001000440	RES CF 1/8W 5% 1R
Q1SR11	245741	0502-001123	TRANSISTOR POWER	R1SS32	161223	2001000429	RES CF 1/8W 5% 1K
Q1SR12	212671	0501-000442	TRANSISTOR	R1SS33	173977	2004000869	RES MF 1/8W 5% 3K
Q3101	245820	501-000303	TRANSISTOR	R1SS34	240733	2004-000459	RES MF 1/8W 1% 2.2K
Q3102	245820	501-000303	TRANSISTOR	R3101	251287	2007-000671	RES CCF 1/10W J 2K
Q3103	186642	0501-000398	TRANSISTOR	R3102	251288	2007-000872	RES CCF 1/10W J 4.7K
Q3104	245820	501-000303	TRANSISTOR	R3103	251289	2007-000241	RES CCF 1/10W 5% 1.5K
Q3105	212671	0501-000442	TRANSISTOR	R3104	251290	2007-000653	RES CCF 1/10W 5% 27K
Q3106	245820	501-000303	TRANSISTOR	R3105	176648	2001000472	RES CF 1/8W 5% 2.7K
Q3107	212671	0501-000442	TRANSISTOR	R3106	251291	2007-000511	RES CCF 1/10W 5% 2.4K
Q3108	212671	0501-000442	TRANSISTOR	R3107	207993	2007-000267	RES CCF 1/10W 5% 1.8K
Q3111	186642	0501-000398	TRANSISTOR	R3108	251292	2007-000002	RES CCF 1/10W 5% 75K
Q3301	186544	0504-000142	TRANSISTOR	R3109	251293	2007-000586	RES CCF 1/10W 5% 22K
Q3302	186642	0501-000398	TRANSISTOR	R3110	251294	2007-001177	RES CCF 1/10W 5% 8.2K
Q3303	186544	0504-000142	TRANSISTOR	R3111	251295	2007-001071	RES 1/10W 5% 8.2K
Q3304	243076	0504-000119	TRANSISTOR DIGITAL	R3112	240719	2007-000468	RES CCF 1/10W 5% 1K
Q3305	243076	0504-000119	TRANSISTOR DIGITAL	R3113	240778	2001-000449	RES CF 1/8W 5% 2.2K
Q3306	186642	0501-000398	TRANSISTOR	R3114	251296	2007-001195	RES 1/10W 5% 820K
Q3307	186642	0501-000398	TRANSISTOR	R3115	251289	2007-000241	RES CCF 1/10W 5% 1.5K
Q3308	243076	0504-000119	TRANSISTOR DIGITAL	R3116	207993	2007-000267	RES CCF 1/10W 5% 1.8K
Q6CM01	186642	0501-000398	TRANSISTOR	R3117	251289	2007-000241	RES CCF 1/10W 5% 1.5K
Q711	245820	501-000303	TRANSISTOR	R3118	251294	2007-001177	RES CCF 1/10W 5% 8.2K
Q712	245820	501-000303	TRANSISTOR	R3120	245989	2007-000300	RES CCF 1/10W 5% 10K
Q713	245820	501-000303	TRANSISTOR	R3126	240737	2001-000454	RES CF 1/8W 5% 2.2M
Q714	245820	501-000303	TRANSISTOR	R3127	251288	2007-000872	RES CCF 1/10W J 4.7K
Q715	245820	501-000303	TRANSISTOR	R3129	251287	2007-000671	RES CCF 1/10W J 2K
Q716	245820	501-000303	TRANSISTOR	R3130	243127	2001-000221	RES CF 1/8W 5% 1.2K
Q717	245820	501-000303	TRANSISTOR	R3131	173939	2001000878	RES CF 1/8W 5% 6.2K
Q718	245820	501-000303	TRANSISTOR	R3132	251297	2007-001224	RES CCF 1/10W 5% 9.1K
R1P101	245742	2001-000855	RES CF 1/4W 5% 560R	R3134	251293	2007-000586	RES CCF 1/10W 5% 22K
R1P103	245839	2001-000034	RES CF 1/4W J 220R	R3135	249427	2007-000931	RES CCF 1/10W 5% 470R
R1P104	243079	2001-000515	RES CF 1/8W 5% 220R	R3136	207993	2007-000267	RES CCF 1/10W 5% 1.8K
R1P109	245743	2001-000036	RES CF 1/4W 5% 330R	R3137	251298	2007-000502	RES CCF 1/10W 5% 2.2R
R1P110	245839	2001-000034	RES CF 1/4W J 220R	R3138	251299	2007-000449	RES CCF 1/10W 5% 180R
R1P201	240778	2001-000449	RES CF 1/8W 5% 2.2K	R3139	175890	2001000613	RES CF 1/8W 5% 3.9K
R1P203	245839	2001-000034	RES CF 1/4W J 220R	R3140	175890	2001000613	RES CF 1/8W 5% 3.9K
R1P210	245839	2001-000034	RES CF 1/4W J 220R	R3141	175054	2001000522	RES CF 1/8W 5% 22K
R1SD11	246692	2001-001000	RES MF 1/8W 5% 82K	R3142	245989	2007-000300	RES CCF 1/10W 5% 10K
R1SD12	188012	2001-000628	RES CF 1/8W 5% 300R	R3144	243125	2001-000331	RES CF 1/8W 5% 12K
R1SD13	246692	2001-001000	RES MF 1/8W 5% 82K	R3145	250461	2007-000572	RES CCF 1/10W 5% 220R
R1SD14	246692	2001-001000	RES MF 1/8W 5% 82K	R3146	251300	2007-000774	RES CCF 1/10W 5% 33K
R1SD15	246692	2001-001000	RES MF 1/8W 5% 82K	R3147	240719	2007-000468	RES CCF 1/10W 5% 1K
R1SD31	175325	2001000281	RES CF 1/8W 5% 100R	R3148	251288	2007-000872	RES CCF 1/10W J 4.7K

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
R3149	251301	2007-001001	RES CCF 1/10W 5% 510R	R6130	161223	2001000429	RES CF 1/8W 5% 1K
R3150	251301	2007-001001	RES CCF 1/10W 5% 510R	R6131	250461	2007-000572	RES CCF 1/10W 5% 220R
R3152	251302	2007-000981	RES CCF 1/10W 5% 6K	R6132	243132	2001-000837	RES CF 1/8W 5% 51K
R3153	245989	2007-000300	RES CCF 1/10W 5% 10K	R6133	250461	2007-000572	RES CCF 1/10W 5% 220R
R3154	248673	2007-000757	RES CCF 1/10W 5% 330K	R6134	175054	2001000522	RES CF 1/8W 5% 22K
R3155	161223	2001000429	RES CF 1/8W 5% 1K	R6135	248674	2007-000738	RES CCF 1/10W 5% 30K
R3156	251303	2007-000565	RES CCF 1/10W 5% 220K	R6136	243123	2001-000864	RES CF 1/8W 5% 56K
R3157	251303	2007-000565	RES CCF 1/10W 5% 220K	R6137	161223	2001000429	RES CF 1/8W 5% 1K
R3158	159643	2001000008	RES CF 1/8W 5% 15K	R6138	243132	2001-000837	RES CF 1/8W 5% 51K
R3159	248674	2007-000738	RES CCF 1/10W 5% 30K	R6139	161223	2001000429	RES CF 1/8W 5% 1K
R3160	245748	2001-000977	RES CF 1/8W 5% 8.2K	R6140	161223	2001000429	RES CF 1/8W 5% 1K
R3161	240723	2007-000964	RES CCF 1/10W 5% 5.1K	R6141	161223	2001000429	RES CF 1/8W 5% 1K
R3162	175322	2001000786	RES CF 1/8W 5% 47K	R6142	157336	2001-000290	RES CF 1/8W 5% 10K
R3167	246765	2001-000595	RES CF 1/8W 5% 3.3M	R6143	251288	2007-000872	RES CCF 1/10W J 4.7K
R3195	240721	2007-000941	RES CCF 1/10W 5% 47K	R6144	245989	2007-000300	RES CCF 1/10W 5% 10K
R3197	245989	2007-000300	RES CCF 1/10W 5% 10K	R6145	251288	2007-000872	RES CCF 1/10W J 4.7K
R3199	175322	2001000786	RES CF 1/8W 5% 47K	R6146	245989	2007-000300	RES CCF 1/10W 5% 10K
R3302	175322	2001000786	RES CF 1/8W 5% 47K	R6147	251288	2007-000872	RES CCF 1/10W J 4.7K
R3303	177743	2001-000924	RES CF 1/8W 5% 680R	R6148	243123	2001-000864	RES CF 1/8W 5% 56K
R3305	240721	2007-000941	RES CCF 1/10W 5% 47K	R6149	230857	2001-000660	RES CF 1/8W 5% 33K
R3308	243085	2001-000563	RES CF 1/8W 5% 27K	R6150	243085	2001-000563	RES CF 1/8W 5% 27K
R3309	246692	2001-001000	RES MF 1/8W 5% 82K	R6151	161223	2001000429	RES CF 1/8W 5% 1K
R3310	161033	2001000890	RES CF 1/8W 5% 6.8K	R6153	243123	2001-000864	RES CF 1/8W 5% 56K
R3311	161223	2001000429	RES CF 1/8W 5% 1K	R6164	161223	2001000429	RES CF 1/8W 5% 1K
R3312	177535	2001000005	RES CF 390R 1/8W 5%	R6168	161223	2001000429	RES CF 1/8W 5% 1K
R3313	161223	2001000429	RES CF 1/8W 5% 1K	R6169	161223	2001000429	RES CF 1/8W 5% 1K
R3314	246764	2001-000006	RES CF 1/8W 5% 2.4K	R6170	161223	2001000429	RES CF 1/8W 5% 1K
R3315	175413	2001000734	RES CF 1/8W 5% 4.7K	R6171	230857	2001-000660	RES CF 1/8W 5% 33K
R3316	161223	2001000429	RES CF 1/8W 5% 1K	R6172	230493	2003-000259	RES MF 2W 5% 3.9R
R3317	179955	2001000702	RES CF 1/8W 5% 39K	R6173	161223	2001000429	RES CF 1/8W 5% 1K
R6101	243132	2001-000837	RES CF 1/8W 5% 51K	R6174	175322	2001000786	RES CF 1/8W 5% 47K
R6102	240725	2007-001039	RES CCF 1/10W 5% 56K	R6175	161223	2001000429	RES CF 1/8W 5% 1K
R6103	240725	2007-001039	RES CCF 1/10W 5% 56K	R6188	248658	2001-000111	RES CF1/4W 5% 150R
R6104	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM02	245989	2007-000300	RES CCF 1/10W 5% 10K
R6105	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM03	240719	2007-000468	RES CCF 1/10W 5% 1K
R6106	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM04	240721	2007-000941	RES CCF 1/10W 5% 47K
R6107	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM05	245989	2007-000300	RES CCF 1/10W 5% 10K
R6108	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM06	207993	2007-000267	RES CCF 1/10W 5% 1.8K
R6109	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM07	179955	2001000702	RES CF 1/8W 5% 39K
R6110	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM08	251290	2007-000653	RES CCF 1/10W 5% 27K
R6111	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM09	251290	2007-000653	RES CCF 1/10W 5% 27K
R6112	175054	2001000522	RES CF 1/8W 5% 22K	R6CM10	240721	2007-000941	RES CCF 1/10W 5% 47K
R6113	243079	2001-000515	RES CF 1/8W 5% 220R	R6CM11	240721	2007-000941	RES CCF 1/10W 5% 47K
R6114	157336	2001-000290	RES CF 1/8W 5% 10K	R6CM14	207993	2007-000267	RES CCF 1/10W 5% 1.8K
R6115	157336	2001-000290	RES CF 1/8W 5% 10K	R6CM15	251304	2007-000395	RES CCF 1/10W 5% 27K
R6116	175054	2001000522	RES CF 1/8W 5% 22K	R6CM16	251304	2007-000395	RES CCF 1/10W 5% 27K
R6117	243079	2001-000515	RES CF 1/8W 5% 220R	R6CM17	240719	2007-000468	RES CCF 1/10W 5% 1K
R6122	161223	2001000429	RES CF 1/8W 5% 1K	R711	157336	2001-000290	RES CF 1/8W 5% 10K
R6123	157336	2001-000290	RES CF 1/8W 5% 10K	R712	157336	2001-000290	RES CF 1/8W 5% 10K
R6125	161223	2001000429	RES CF 1/8W 5% 1K	R713	157336	2001-000290	RES CF 1/8W 5% 10K
R6127	161223	2001000429	RES CF 1/8W 5% 1K	R714	157336	2001-000290	RES CF 1/8W 5% 10K
R6128	157336	2001-000290	RES CF 1/8W 5% 10K	R715	157336	2001-000290	RES CF 1/8W 5% 10K
R6129	157336	2001-000290	RES CF 1/8W 5% 10K	R716	157336	2001-000290	RES CF 1/8W 5% 10K

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
R717	157336	2001-000290	RES CF 1/8W 5% 10K	C3224	186763	2401002165	CAP LYTC 100UF M 16V
R718	157336	2001-000290	RES CF 1/8W 5% 10K	C3225	245694	2203000476	CAPCC 1UF Z 16V
R81M3	175322	2001000786	RES CF 1/8W 5% 47K	C3226	245694	2203000476	CAPCC 1UF Z 16V
S6101	245750	0603-001011	TRANSISTOR PHOTO	C3227	245702	2203-000989	CAPCC 47NF K 50V
S6101A	248698	AC61-21008A	HOLDER SENSOR	C3229	245694	2203000476	CAPCC 1UF Z 16V
S6102	245750	0603-001011	TRANSISTOR PHOTO	C3230	197059	2203-000260	CAPCC .01UF 50V
S6102A	248698	AC61-21008A	HOLDER SENSOR	C3231	245694	2203000476	CAPCC 1UF Z 16V
SC1SS1	N/S/P	AC63-00010A	SHIELD	C3232	245703	2401-000414	CAP LYTC 10UF M 16V
SCD33A	222668	6003-000283	SCREW	C3233	222780	2203-000192	CAPCC .1UF Z 50V
SCQ11A	222668	6003-000283	SCREW	C3234	245702	2203-000989	CAPCC 47NF K 50V
SW6102	245752	AC34-20100B	SWITCH	C3235	245702	2203-000989	CAPCC 47NF K 50V
SW6103	245753	AC34-20100A	SWITCH	C3236	222780	2203-000192	CAPCC .1UF Z 50V
TP3101	N/S/P	3811-000389	WIRE	C3237	147624	2401-001545	CAP LYTC 47UF 25V
TP6101	N/S/P	3811-000389	WIRE	C3238	245705	2401-000913	CAP LYTC 22UF M 16V
TP6102	N/S/P	3811-000389	WIRE	C3239	245689	2401-002075	CAP LYTC 4.7UF M 50V
TP6103	N/S/P	3811-000389	WIRE	C3241	222780	2203-000192	CAPCC .1UF Z 50V
VA1SS1	245755	1405-001026	VARISTOR 470V	C3242	147624	2401-001545	CAP LYTC 47UF 25V
XT3101	243148	2801-003610	CRISTAL 3.57MHZ	C3243	245836	2203-001724	CAPCC 4.7UF 16V
XT6101	245756	2801-003139	CRYSTAL 8MHZ	C3244	229155	2203-001214	CAPACITOR
ZD1P01	215445	403-000390	DIODE	C3245	245707	2301-001014	CAPCF 6.8NF J 50V
ZD1P02	245758	0403-000717	DIODE ZENER	C3246	197059	2203-000260	CAPCC .01UF 50V
ZD1P03	245841	0403-000720	DIODE ZENER	C3247	222728	2007-000029	RES CCF 1/10W 5% 0R
ZD1P05	245759	0403-001211	DIODE ZENER	C3249	251282	2203-001077	CAPCC 56PF J 50V
ZD1P06	251309	0403-001141	DIODE ZENER	C3250	245704	2401-002144	CAP LYTC 47UF M 16V
ZD1P22	245758	0403-000717	DIODE ZENER	C3251	197059	2203-000260	CAPCC .01UF 50V
ZD1P25	245759	0403-001211	DIODE ZENER	C3252	245708	2301-000253	CAPCF 39NF J 100V
ZD1SR1	212666	403-000571	DIODE ZENER	C3253	222780	2203-000192	CAPCC .1UF Z 50V
ELECTRICAL COMPONENTS (B)				C3256	197059	2203-000260	CAPCC .01UF 50V
C2P101	222780	2203-000192	CAPCC .1UF Z 50V	C3257	245687	2401-001730	CAP LYTC 10UF M 50V
C2P102	245701	2202-002037	CAPCC .1UF M 50V	C3258	245709	2203-000495	CAPCC 2.2NF K 50V
C3201	245694	2203000476	CAPCC 1UF Z 16V	C3259	215181	2203-001665	CAPCC .560UF K 50V
C3202	152267	2401-001507	CAP LYTC 47UF 16V	C3261	245694	2203000476	CAPCC 1UF Z 16V
C3203	222780	2203-000192	CAPCC .1UF Z 50V	C3262	197059	2203-000260	CAPCC .01UF 50V
C3204	245696	2203-001721	CAPCC 360PF J 50V	C3264	197059	2203-000260	CAPCC .01UF 50V
C3205	193586	2401-001915	CAP LYTC 1UF 50V	C3265	186999	2202000797	CAPCD .01UF 30% 16V
C3206	251280	2203-000408	CAPCC 180PF J 50V	C3266	245701	2202-002037	CAPCC .1UF M 50V
C3207	251281	2203-000555	CAPCC 20PF J 50V	C3268	222780	2203-000192	CAPCC .1UF Z 50V
C3209	243245	2401-000922	CAP LYTC 22UF M 16V	C3269	251284	2203-000634	CAPCC 22PF J 50V
C3210	222780	2203-000192	CAPCC .1UF Z 50V	C3270	186999	2202000797	CAPCD .01UF 30% 16V
C3211	197059	2203-000260	CAPCC .01UF 50V	C3271	197059	2203-000260	CAPCC .01UF 50V
C3212	245694	2203000476	CAPCC 1UF Z 16V	C3274	197059	2203-000260	CAPCC .01UF 50V
C3213	214962	2203-000609	CAPCC .022UF K 50V	C3275	197059	2203-000260	CAPCC .01UF 50V
C3214	245697	2401-000407	CAP LYTC 10UF M 16V	C3560	242991	2401-002299	CAP LYTC 4.7UF M 50V
C3215	193586	2401-001915	CAP LYTC 1UF 50V	C401	222780	2203-000192	CAPCC .1UF Z 50V
C3216	193586	2401-001915	CAP LYTC 1UF 50V	C405	245704	2401-002144	CAP LYTC 47UF M 16V
C3217	245694	2203000476	CAPCC 1UF Z 16V	C406	245701	2202-002037	CAPCC .1UF M 50V
C3218	245700	2401-000598	CAP LYTC 1UF M 50V	C407	245701	2202-002037	CAPCC .1UF M 50V
C3219	186999	2202000797	CAPCD .01UF 30% 16V	C6201	222780	2203-000192	CAPCC .1UF Z 50V
C3220	186999	2202000797	CAPCD .01UF 30% 16V	C6202	222780	2203-000192	CAPCC .1UF Z 50V
C3221	222780	2203-000192	CAPCC .1UF Z 50V	C6203	197059	2203-000260	CAPCC .01UF 50V
C3222	147624	2401-001545	CAP LYTC 47UF 25V	C6204	147624	2401-001545	CAP LYTC 47UF 25V
C3223	245701	2202-002037	CAPCC .1UF M 50V	C6205	251325	2203-001164	CAPCC 68PF J 50V
				C6206	245700	2401-000598	CAP LYTC 1UF M 50V

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
C6207	245700	2401-000598	CAP LYTC 1UF M 50V	C805	245687	2401-001730	CAP LYTC 10UF M 50V
C6208	147624	2401-001545	CAP LYTC 47UF 25V	C806	245687	2401-001730	CAP LYTC 10UF M 50V
C6209	222780	2203-000192	CAPCC .1UF Z 50V	C807	245687	2401-001730	CAP LYTC 10UF M 50V
C6210	251284	2203-000634	CAPCC 22PF J 50V	C808	245687	2401-001730	CAP LYTC 10UF M 50V
C6211	251284	2203-000634	CAPCC 22PF J 50V	C810	245687	2401-001730	CAP LYTC 10UF M 50V
C6212	251284	2203-000634	CAPCC 22PF J 50V	C811	245687	2401-001730	CAP LYTC 10UF M 50V
C6213	245702	2203-000989	CAPCC .047UF K 50V	C813	245687	2401-001730	CAP LYTC 10UF M 50V
C6214	197059	2203-000260	CAPCC .01UF 50V	C814	245687	2401-001730	CAP LYTC 10UF M 50V
C6215	251284	2203-000634	CAPCC 22PF J 50V	C815	245687	2401-001730	CAP LYTC 10UF M 50V
C6216	251284	2203-000634	CAPCC 22PF J 50V	C816	245687	2401-001730	CAP LYTC 10UF M 50V
C6217	251284	2203-000634	CAPCC 22PF J 50V	C817	245687	2401-001730	CAP LYTC 10UF M 50V
C6218	251284	2203-000634	CAPCC 22PF J 50V	C819	245687	2401-001730	CAP LYTC 10UF M 50V
C6220	197059	2203-000260	CAPCC .01UF 50V	C820	245687	2401-001730	CAP LYTC 10UF M 50V
C6221	245703	2401-000414	CAP LYTC 10UF M 16V	C821	245687	2401-001730	CAP LYTC 10UF M 50V
C6222	200004	2401-000199	CAP LYTC 1000UF 6.3V	C823	245687	2401-001730	CAP LYTC 10UF M 50V
C6223	251284	2203-000634	CAPCC 22PF J 50V	C824	245687	2401-001730	CAP LYTC 10UF M 50V
C6224	194339	2401000918	CAP LYTC 22UF 16V	C825	245687	2401-001730	CAP LYTC 10UF M 50V
C6225	245701	2202-002037	CAPCC .1UF M 50V	C826	245687	2401-001730	CAP LYTC 10UF M 50V
C6226	147624	2401-001545	CAP LYTC 47UF 25V	C827	245687	2401-001730	CAP LYTC 10UF M 50V
C6227	186999	2202000797	CAPCD .01UF 30% 16V	C828	245704	2401-002144	CAP LYTC 47UF M 16V
C6228	152267	2401-001507	CAP LYTC 47UF 16V	C829	222780	2203-000192	CAPCC .1UF Z 50V
C6229	197059	2203-000260	CAPCC .01UF 50V	C830	227898	2401001479	CAP LYTC 47UF M 10V
C6230	186763	2401002165	CAP LYTC 100UF M 16V	C832	245704	2401-002144	CAP LYTC 47UF M 16V
C6232	251285	2203-000239	CAPCC 100PF J 50V	C833	198572	2202000279	CAPCD 47PF J 50V
C6233	245701	2202-002037	CAPCC .1UF M 50V	C834	242987	2202-000121	CAPCD 100PF K 50V
C6234	214943	2203-000938	CAPCC 470PF K 50V	C835	242991	2401-002299	CAP LYTC 4.7UF M 50V
C6236	197059	2203-000260	CAPCC .01UF 50V	C838	245687	2401-001730	CAP LYTC 10UF M 50V
C6237	197059	2203-000260	CAPCC .01UF 50V	C839	245687	2401-001730	CAP LYTC 10UF M 50V
C6238	245701	2202-002037	CAPCC .1UF M 50V	C842	245703	2401-000414	CAP LYTC 10UF M 16V
C6240	245713	2203-000802	CAPCC .033UF K 50V	C844	245688	2401-002036	CAP LYTC 1UF M 50V
C6241	245702	2203-000989	CAPCC .047UF K 50V	C845	N/S/P	3811-000389	WIRE
C6243	251325	2203-001164	CAPCC 68PF J 50V	C8M1	245713	2203-000802	CAPCC 33NF K 50V
C6245	230484	2203-000540	CAPCC 200PF J 50V	CN102	251312	3711-000666	CONNECTOR 12P
C6247	232586	2203-001143	CAPCC 200PF J 50V	CN102B	N/S/P	AC39-00012A	CONNECTOR ASY
C6248	232586	2203-001143	CAPCC 200PF J 50V	CN3201	233763	3708-000395	CONNECTOR
C6250	147624	2401-001545	CAP LYTC 47UF 25V	CN3202	229171	3711-002445	CONNECTOR
C6251	197059	2203-000260	CAPCC .01UF 50V	CN3203	245714	3708-001302	CONNECTOR
C6255	197059	2203-000260	CAPCC .01UF 50V	CN323B	245715	3809-001110	CABLE FLAT 7P
C6256	147624	2401-001545	CAP LYTC 47UF 25V	CN5201	251313	3711-000596	CONNECTOR 10P
C6257	147624	2401-001545	CAP LYTC 47UF 25V	CN6201	245716	AC39-20817S	CONNECTOR ASSEMBLY
C6258	197059	2203-000260	CAPCC .01UF 50V	CN6202	251312	3711-000666	CONNECTOR 12P
C6259	186999	2202000797	CAPCD .01UF 30% 16V	CN6204	245717	3711-003749	CONNECTOR 8P
C6260	147624	2401-001545	CAP LYTC 47UF 25V	CN6205	245718	3708-001163	CONNECTOR 5P
C6261	245701	2202-002037	CAPCC .1UF M 50V	CN625B	245719	3809-001112	CABLE FLAT 5P
C6262	222780	2203-000192	CAPCC .1UF Z 50V	CN702	251332	3711-004319	CONNECTOR 15P
C6263	197059	2203-000260	CAPCC .01UF 50V	D3201	240679	0401-000101	DIODE
C6264	230477	2203-001579	CAPCC .015UF K 50V	D3202	240679	0401-000101	DIODE
C6266	186999	2202000797	CAPCD .01UF 30% 16V	D6201	155276	0402-000127	DIODE
C6E01	186999	2202000797	CAPCD .01UF 30% 16V	D6202	240679	0401-000101	DIODE
C801	245704	2401-002144	CAP LYTC 47UF M 16V	D6203	155276	0402-000127	DIODE
C802	245701	2202-002037	CAPCC .1UF M 50V	D6204	240679	0401-000101	DIODE
C803	245704	2401-002144	CAP LYTC 47UF M 16V	D6205	240679	0401-000101	DIODE
C804	222780	2203-000192	CAPCC .1UF Z 50V	D801	240679	0401-000101	DIODE

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
D802	240679	0401-000101	DIODE	R3207	207993	2007-000267	RES CCF 1/10W 5% 1.8K
D803	240679	0401-000101	DIODE	R3208	251292	2007-000002	RES CCF 1/10W 5% 75K
FL3201	245728	AC27-80100C	COIL	R3209	251293	2007-000586	RES CCF 1/10W 5% 22K
GP6201	N/S/P	AC61-30181A	PLATE GROUND	R3210	251294	2007-001177	RES CCF 1/10W 5% 8.2K
IC3201	248650	1204-001644	IC VIDEO PROCESS LA71069M	R3211	251295	2007-001071	RES 1/10W 5% 8.2K
IC6201	251326	AC09-00165A	IC	R3212	240719	2007-000468	RES CCF 1/10W 5% 1K
IC6202	245732	1003-001162	IC MOTOR DRIVER KA3082	R3213	240778	2001-000449	RES CF 1/8W 5% 2.2K
IC6203	248676	1103-001149	IC EEPROM	R3214	251296	2007-001195	RES 1/10W 5% 820K
IC6205	212578	AC14-12006C	IC	R3215	251289	2007-000241	RES CCF 1/10W 5% 1.5K
IC6206	212578	AC14-12006C	IC	R3216	207993	2007-000267	RES CCF 1/10W 5% 1.8K
IC6E01	251327	AC09-00116A	IC	R3217	251289	2007-000241	RES CCF 1/10W 5% 1.5K
IC801	251328	AC14-12015T	IC	R3218	251294	2007-001177	RES CCF 1/10W 5% 8.2K
J3201	222728	2007-000029	RESISTOR	R3220	245989	2007-000300	RES CCF 1/10W 5% 10K
J8M1	222728	2007-000029	RESISTOR	R3226	240737	2001-000454	RES CF 1/8W 5% 2.2M
JK801	245736	AC37-20001H	JACK RCA	R3227	175413	2001000734	RES CF 1/8W 5% 4.7K
L3201	227549	2701-000002	COIL	R3229	251287	2007-000671	RES CCF 1/10W J 2K
L3202	186692	2702000108	INDUCTOR	R3230	250458	2007-000221	RES CCF 1/10W 5% 1.2K
L3204	227549	2701-000002	COIL	R3231	245988	2007-001055	RES CCF 1/10W 5% 6.2K
L3205	186692	2702000108	INDUCTOR	R3232	251297	2007-001224	RES CCF 1/10W 5% 9.1K
L3206	196197	2702-000120	COIL	R3234	175054	2001000522	RES CF 1/8W 5% 22K
L3207	186692	2702000108	INDUCTOR	R3235	249427	2007-000931	RES CCF 1/10W 5% 470R
L3208	251308	2702-000163	COIL 470UH	R3236	207993	2007-000267	RES CCF 1/10W 5% 1.8K
L401	227549	2701-000002	COIL	R3237	251298	2007-000502	RES CCF 1/10W 5% 2.2R
L6201	248656	2702-000106	COIL INDUCTOR	R3238	251299	2007-000449	RES CCF 1/10W 5% 180R
L6203	227549	2701-000002	COIL	R3239	175890	2001000613	RES CF 1/8W 5% 3.9K
L6204	227549	2701-000002	COIL	R3240	175890	2001000613	RES CF 1/8W 5% 3.9K
L6205	251331	2701-000181	COIL 33UH	R3241	175054	2001000522	RES CF 1/8W 5% 22K
L801	186692	2702000108	INDUCTOR	R3242	245989	2007-000300	RES CCF 1/10W 5% 10K
L802	227549	2701-000002	COIL	R3244	243125	2001-000331	RES CF 1/8W 5% 12K
L803	240688	2701-000145	COIL	R3245	250461	2007-000572	RES CCF 1/10W 5% 220R
LD6201	245738	0601-000517	DIODE LED	R3246	251300	2007-000774	RES CCF 1/10W 5%33K
LD621A	247767	AC61-21009A	HOLDER LED	R3247	240719	2007-000468	RES CCF 1/10W 5% 1K
PT6201	251323	0604-001206	SENSOR PHOTO	R3248	251288	2007-000872	RES CCF 1/10W J 4.7K
PT6202	251323	0604-001206	SENSOR PHOTO	R3249	251301	2007-001001	RES CCF 1/10W 5% 510R
Q3201	245820	501-000303	TRANSISTOR	R3250	251301	2007-001001	RES CCF 1/10W 5% 510R
Q3202	245820	501-000303	TRANSISTOR	R3252	251302	2007-000981	RES CCF 1/10W 5% 6K
Q3203	186642	0501-000398	TRANSISTOR	R3253	245989	2007-000300	RES CCF 1/10W 5% 10K
Q3204	245820	501-000303	TRANSISTOR	R3254	248673	2007-000757	RES CCF 1/10W 5% 330K
Q3205	212671	0501-000442	TRANSISTOR	R3255	161223	2001000429	RES CF 1/8W 5% 1K
Q3206	245820	501-000303	TRANSISTOR	R3256	251303	2007-000565	RES CCF 1/10W 5% 220K
Q3207	212671	0501-000442	TRANSISTOR	R3257	251303	2007-000565	RES CCF 1/10W 5% 220K
Q3208	212671	0501-000442	TRANSISTOR	R3258	159643	2001000008	RES CF 1/8W 5% 15K
Q3211	186642	0501-000398	TRANSISTOR	R3259	248674	2007-000738	RES CCF 1/10W 5% 30K
Q6201	186642	0501-000398	TRANSISTOR	R3260	245748	2001-000977	RES CF 1/8W 5% 8.2K
Q6202	245820	501-000303	TRANSISTOR	R3261	240723	2007-000964	RES CCF 1/10W 5% 5.1K
Q6203	186642	0501-000398	TRANSISTOR	R3262	175322	2001000786	RES CF 1/8W 5% 47K
Q801	245820	501-000303	TRANSISTOR	R3267	246765	2001-000595	RES CF 1/8W 5% 3.3M
R3201	251287	2007-000671	RES CCF 1/10W J 2K	R3295	240721	2007-000941	RES CCF 1/10W 5% 47K
R3202	251288	2007-000872	RES CCF 1/10W J 4.7K	R3297	245989	2007-000300	RES CCF 1/10W 5% 10K
R3203	251289	2007-000241	RES CCF 1/10W 5% 1.5K	R3299	175322	2001000786	RES CF 1/8W 5% 47K
R3204	251290	2007-000653	RES CCF 1/10W 5% 27K	R401	151453	2001000995	RES CF 1/8W 5% 820R
R3205	176648	2001000472	RES CF 1/8W 5% 2.7K	R402	151453	2001000995	RES CF 1/8W 5% 820R
R3206	251291	2007-000511	RES CCF 1/10W 5%2.4K	R6201	173033	2001000273	RES CF 1/8W 5% 100K

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
R6202	161223	2001000429	RES CF 1/8W 5% 1K	R6269	161223	2001000429	RES CF 1/8W 5% 1K
R6203	161223	2001000429	RES CF 1/8W 5% 1K	R6270	161223	2001000429	RES CF 1/8W 5% 1K
R6204	161223	2001000429	RES CF 1/8W 5% 1K	R6271	251300	2007-000774	RES CCF 1/10W 5%33K
R6205	161223	2001000429	RES CF 1/8W 5% 1K	R6272	230493	2003-000259	RES MF 2W 5% 3.9R
R6206	177535	2001000005	RES CF 390R 1/8W 5%	R6273	161223	2001000429	RES CF 1/8W 5% 1K
R6207	249424	2007-000493	RES CCF 1/10W 5% 2.2K	R6274	175322	2001000786	RES CF 1/8W 5% 47K
R6211	240719	2007-000468	RES CCF 1/10W 5% 1K	R6276	161223	2001000429	RES CF 1/8W 5% 1K
R6212	175054	2001000522	RES CF 1/8W 5% 22K	R6277	230857	2001-000660	RES CF 1/8W 5% 33K
R6213	243079	2001-000515	RES CF 1/8W 5% 220R	R6280	251288	2007-000872	RES CCF 1/10W J 4.7K
R6214	157336	2001-000290	RES CF 1/8W 5% 10K	R6281	240721	2007-000941	RES CCF 1/10W 5% 47K
R6215	157336	2001-000290	RES CF 1/8W 5% 10K	R6282	251289	2007-000241	RES CCF 1/10W 5% 1.5K
R6216	251293	2007-000586	RES CCF 1/10W 5% 22K	R6283	245989	2007-000300	RES CCF 1/10W 5% 10K
R6217	250461	2007-000572	RES CCF 1/10W 5% 220R	R6284	249424	2007-000493	RES CCF 1/10W 5% 2.2K
R6218	161223	2001000429	RES CF 1/8W 5% 1K	R6285	251329	2007-001141	RES CCF 1/10W 5% 7.5K
R6219	175306	2001000010	RES CF 1/8W 5% 68K	R6286	251330	2007-001149	RES CCF 1/10W 5% 750K
R6221	160301	2001000458	RES CF 1/8W 5% 2.2R	R6288	248658	2001-000111	RES CF1/4W 5% 150R
R6222	161223	2001000429	RES CF 1/8W 5% 1K	R6E01	157336	2001-000290	RES CF 1/8W 5% 10K
R6223	245989	2007-000300	RES CCF 1/10W 5% 10K	R6E02	157336	2001-000290	RES CF 1/8W 5% 10K
R6224	161223	2001000429	RES CF 1/8W 5% 1K	R741	173033	2001000273	RES CF 1/8W 5% 100K
R6225	161223	2001000429	RES CF 1/8W 5% 1K	R742	173033	2001000273	RES CF 1/8W 5% 100K
R6226	175412	2001000780	RES CF 1/8W 5% 470R	R801	155441	2001001026	RES CF 1/8W 5% 910R
R6227	175412	2001000780	RES CF 1/8W 5% 470R	R802	161223	2001000429	RES CF 1/8W 5% 1K
R6228	245989	2007-000300	RES CCF 1/10W 5% 10K	R803	245839	2001-000034	RES CF 1/4W J 220R
R6229	245989	2007-000300	RES CCF 1/10W 5% 10K	R804	149603	2001001006	RES CC 1/8W 5% 82R
R6230	240719	2007-000468	RES CCF 1/10W 5% 1K	R806	161223	2001000429	RES CF 1/8W 5% 1K
R6231	210853	2007-000822	RES CCF 1/10W 5% 390R	R807	175325	2001000281	RES CF 1/8W 5% 100R
R6232	243132	2001-000837	RES CF 1/8W 5% 51K	R808	175325	2001000281	RES CF 1/8W 5% 100R
R6233	210853	2007-000822	RES CCF 1/10W 5% 390R	R809	173979	2001000969	RES CCF 1/8W 5% 75R
R6234	251293	2007-000586	RES CCF 1/10W 5% 22K	R811	240721	2007-000941	RES CCF 1/10W 5% 47K
R6235	248674	2007-000738	RES CCF 1/10W 5% 30K	R82M3	175322	2001000786	RES CF 1/8W 5% 47K
R6236	240725	2007-001039	RES CCF 1/10W 5% 56K	S6201	245750	0603-001011	TRANSISTOR PHOTO
R6237	161223	2001000429	RES CF 1/8W 5% 1K	S6201A	248698	AC61-21008A	HOLDER SENSOR
R6238	243132	2001-000837	RES CF 1/8W 5% 51K	S6202	245750	0603-001011	TRANSISTOR PHOTO
R6239	240719	2007-000468	RES CCF 1/10W 5% 1K	S6202A	248698	AC61-21008A	HOLDER SENSOR
R6240	240719	2007-000468	RES CCF 1/10W 5% 1K	SW401	212622	3408-000127	SWITCH
R6241	161223	2001000429	RES CF 1/8W 5% 1K	SW6202	245752	AC34-20100B	SWITCH
R6242	245989	2007-000300	RES CCF 1/10W 5% 10K	SW6203	245753	AC34-20100A	SWITCH
R6243	251288	2007-000872	RES CCF 1/10W J 4.7K	TM401	251335	AC40-00001M	CIRCUIT TUNER
R6244	245989	2007-000300	RES CCF 1/10W 5% 10K	TM401B	N/S/P	AC61-00026D	CONNECTOR BOARD ASY
R6245	251288	2007-000872	RES CCF 1/10W J 4.7K	TP6201	N/S/P	3811-000389	WIRE
R6246	245989	2007-000300	RES CCF 1/10W 5% 10K	TP801	N/S/P	3811-000389	WIRE
R6247	251288	2007-000872	RES CCF 1/10W J 4.7K	TP802	N/S/P	3811-000389	WIRE
R6248	243123	2001-000864	RES CF 1/8W 5% 56K	TP803	N/S/P	3811-000389	WIRE
R6249	161223	2001000429	RES CF 1/8W 5% 1K	TP804	N/S/P	3811-000389	WIRE
R6250	243085	2001-000563	RES CF 1/8W 5% 27K	W2118	161223	2001000429	RES CF 1/8W 5% 1K
R6251	161223	2001000429	RES CF 1/8W 5% 1K	W2119	161223	2001000429	RES CF 1/8W 5% 1K
R6252	240719	2007-000468	RES CCF 1/10W 5% 1K	W2137	161223	2001000429	RES CF 1/8W 5% 1K
R6253	243123	2001-000864	RES CF 1/8W 5% 56K	W2143	161223	2001000429	RES CF 1/8W 5% 1K
R6258	161223	2001000429	RES CF 1/8W 5% 1K	W2148	151448	2001-000405	RES CF 1/8W 5% 180R
R6261	240719	2007-000468	RES CCF 1/10W 5% 1K	W2149	151448	2001-000405	RES CF 1/8W 5% 180R
R6262	161223	2001000429	RES CF 1/8W 5% 1K	W2215	222860	3301-000297	BEAD
R6263	161223	2001000429	RES CF 1/8W 5% 1K	WQC02	161223	2001000429	RES CF 1/8W 5% 1K
R6264	161223	2001000429	RES CF 1/8W 5% 1K	XT3201	243148	2801-003610	CRISTAL 3.57MHZ

REPLACEMENT PARTS (Continued)

Symbol	Stock	Drawing	Description
XT6201	245756	2801-003139	CRYSTAL 8MHZ
XT6202	245757	2801-003318	CRYSTAL 32.768KHZ
XT6203	212664	2801-001384	CRYSTAL
FUNCTION/TIMER			
C703	186999	2202000797	CAPCD .01UF 30% 16V
C704	245762	2401-002008	CAP LYTC 100UF M 16V
C705	245760	2202-000173	CAPCD .001UF K 50V
CN703	251338	3710-001513	CONNECTOR 27P
CN704	251339	3710-001512	CONNECTOR 15P
D702	240679	0401-000101	DIODE
D703	240679	0401-000101	DIODE
D704	240679	0401-000101	DIODE
D705	240679	0401-000101	DIODE
D706	240679	0401-000101	DIODE
DT701	251382	AC07-00001A	DISPLAY
DT701A	N/S/P	AC61-00003A	HOLDER DIGITRON
JK701	245735	AC37-22002S	JACK AUDIO/VIDEO IN
L702	227549	2701-000002	COIL
LD701	251341	0601-000497	DIODE LED GREEN
LD701A	N/S/P	AC61-20240A	HOLDER
Q701	245820	501-000303	TRANSISTOR
Q702	245820	501-000303	TRANSISTOR
Q703	245820	501-000303	TRANSISTOR
Q704	245820	501-000303	TRANSISTOR
Q705	245820	501-000303	TRANSISTOR
Q706	245820	501-000303	TRANSISTOR
Q707	245820	501-000303	TRANSISTOR
Q708	245820	501-000303	TRANSISTOR
Q709	245820	501-000303	TRANSISTOR
Q710	245820	501-000303	TRANSISTOR
Q719	186544	0504-000142	TRANSISTOR
R719	173033	2001000273	RES CF 1/8W 5% 100K
R720	173033	2001000273	RES CF 1/8W 5% 100K
R721	173033	2001000273	RES CF 1/8W 5% 100K
R722	173033	2001000273	RES CF 1/8W 5% 100K
R723	173033	2001000273	RES CF 1/8W 5% 100K
R724	173033	2001000273	RES CF 1/8W 5% 100K
R725	173033	2001000273	RES CF 1/8W 5% 100K
R726	173033	2001000273	RES CF 1/8W 5% 100K
R727	173033	2001000273	RES CF 1/8W 5% 100K
R728	173033	2001000273	RES CF 1/8W 5% 100K
R729	173033	2001000273	RES CF 1/8W 5% 100K
R730	173033	2001000273	RES CF 1/8W 5% 100K
R731	173033	2001000273	RES CF 1/8W 5% 100K
R732	173033	2001000273	RES CF 1/8W 5% 100K
R733	173033	2001000273	RES CF 1/8W 5% 100K
R734	173033	2001000273	RES CF 1/8W 5% 100K
R735	173033	2001000273	RES CF 1/8W 5% 100K
R736	173033	2001000273	RES CF 1/8W 5% 100K
R737	173033	2001000273	RES CF 1/8W 5% 100K
R738	173033	2001000273	RES CF 1/8W 5% 100K
R739	175045	2001000003	RES CF 1/8W 5% 330R

Symbol	Stock	Drawing	Description
R740	251336	2001-000110	RES CF 1/4W 5% 10R
R743	157336	2001-000290	RES CF 1/8W 5% 10K
R744	173979	2001000969	RES CCF 1/8W 5% 75R
RM701	251383	AC32-00004A	RECEIVER REMOTE
SW701	245754	3404-000165	SWITCH
SW702	245754	3404-000165	SWITCH
SW703	245754	3404-000165	SWITCH
SW704	245754	3404-000165	SWITCH
SW705	245754	3404-000165	SWITCH
SW706	245754	3404-000165	SWITCH
SW707	245754	3404-000165	SWITCH
SW708	245754	3404-000165	SWITCH
SW709	245754	3404-000165	SWITCH
SW710	245754	3404-000165	SWITCH
SW711	245754	3404-000165	SWITCH
SW712	245754	3404-000165	SWITCH
SW713	245754	3404-000165	SWITCH
W706	232026	2701-000122	COIL
ZD701	251337	0403-000509	DIODE ZENER
INCLUDED ACCESSORIES			
CABL	207417	AC3942001J	CABLE, RF
INSTRUMENT ASSEMBLY			
1	251273	AC97-00304N	● PANEL, FRONT ASY
3	251277	AC64-00021H	DOOR, PANEL
101	251272	AC64-30893B	● CABINET, TOP
102	251279	AC63-30520A	● COVER, BOTTOM
103	251278	AC61-00027A	BRACKET, FRAME
153	186621	AC60-12126A	SCREW
155	192217	AC60-12134A	SCREW
157	218991	AC60-10063A	SCREW
200	245686	AC39-10200N	CORD, POWER
21	251274	AC64-00014M	DOOR, CASSETTE (L)
22	251275	AC64-00014N	DOOR, CASSETTE (R)
23	245685	AC61-62032A	SPRING
601	N/S/P	AC92-00688A	CIRCUIT, MAIN A
602	N/S/P	AC92-00688B	CIRCUIT, MAIN B
701	N/S/P	AC94-00056A	FUNCTION/TIMER
MECHANICAL ASSEMBLY			
B238	245767	AC61-50660A	● SLEEVE, TENSION
B238	245767	AC61-50660A	● SLEEVE, TENSION
B410	248667	AC31-12016D	MOTOR, LOADING ASSEMBLY
B410	248667	AC31-12016D	MOTOR, LOADING ASSEMBLY
B440	245769	AC60-10515A	● SCREW
B440	245769	AC60-10515A	● SCREW
B444	245770	AC66-20571A	GEAR, WORM
B444	245770	AC66-20571A	GEAR, WORM
B446	245771	AC61-21005A	HOLDER
B446	245771	AC61-21005A	HOLDER
B448	245772	AC66-20573A	GEAR, WORM WHEEL
B448	245772	AC66-20573A	GEAR, WORM WHEEL
B452	245773	AC66-20575A	GEAR

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
B452	245773	AC66-20575A	GEAR
B456	245774	AC66-20576A	GEAR
B456	245774	AC66-20576A	GEAR
B458	245775	AC66-20574A	GEAR
B458	245775	AC66-20574A	GEAR
B462	247436	AC60-10517A	● SCREW
B462	247436	AC60-10517A	● SCREW
B473	245779	AC61-60559A	SPRING
B473	245779	AC61-60559A	SPRING
B484	245776	AC66-20580A	GEAR, LOADING
B484	245776	AC66-20580A	GEAR, LOADING
B488	245777	AC66-30543A	LEVER, LOAD ASY
B488	245777	AC66-30543A	LEVER, LOAD ASY
B500	245778	AC66-30542A	LEVER, LOAD ASY
B500	245778	AC66-30542A	LEVER, LOAD ASY
B560	251342	AC31-00006A	MOTOR, CAPSTAN
B560	251342	AC31-00006A	MOTOR, CAPSTAN
B570	245800	AC60-10514A	● SCREW, CAPSTAN
B570	245800	AC60-10514A	● SCREW, CAPSTAN
G001	248678	AC97-00739A	CYLINDER, ASSEMBLY
G001	248678	AC97-00739A	CYLINDER, ASSEMBLY
G420	245792	AC66-80142A	SLIDER, SUPPLY ASSEMBLY
G420	245792	AC66-80142A	SLIDER, SUPPLY ASSEMBLY
G450	245793	AC66-80141A	SLIDER, TAKE UP ASSEMBLY
G450	245793	AC66-80141A	SLIDER, TAKE UP ASSEMBLY
G480	248663	AC33-00003A	HEAD, ASSEMBLY
G480	248663	AC33-00003A	HEAD, ASSEMBLY
G510	248677	006-001075	● SCREW, ASSEMBLY
G510	248677	006-001075	● SCREW, ASSEMBLY
G520	245794	AC66-30539A	LEVER, GUIDE ASSEMBLY
G520	245794	AC66-30539A	LEVER, GUIDE ASSEMBLY
G527	245795	AC61-60553A	SPRING
G527	245795	AC61-60553A	SPRING
G530	248669	AC33-00002A	HEAD, FE
G530	248669	AC33-00002A	HEAD, FE
G532	245805	AC60-10519A	● SCREW
G532	245805	AC60-10519A	● SCREW
G542	245801	AC66-60051A	BELT, PULLEY
G542	245801	AC66-60051A	BELT, PULLEY
G546	245806	AC66-30535A	LEVER, DOOR
G546	245806	AC66-30535A	LEVER, DOOR
G555	245780	AC59-90403A	ROLLER, PINCH ASSEMBLY
G555	245780	AC59-90403A	ROLLER, PINCH ASSEMBLY
G680	245812	AC6630557A	LEVER, H/CLEANER ASSEMBLY
G680	245812	AC6630557A	LEVER, H/CLEANER ASSEMBLY
K110	245784	AC66-10267A	REEL
K110	245784	AC66-10267A	REEL
K140	245785	AC66-10268A	REEL
K140	245785	AC66-10268A	REEL
K182	245790	AC66-30524A	LEVER, IDLER
K182	245790	AC66-30524A	LEVER, IDLER

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
K188	245791	AC66-20577A	GEAR, IDLER
K188	245791	AC66-20577A	GEAR, IDLER
K200	245786	AC61-21012A	HOLDER, CLUTCH ASSEMBLY
K200	245786	AC61-21012A	HOLDER, CLUTCH ASSEMBLY
K221	245787	AC66-20581A	GEAR, CENTER ASSEMBLY
K221	245787	AC66-20581A	GEAR, CENTER ASSEMBLY
K222	245788	AC60-30306A	WASHER
K222	245788	AC60-30306A	WASHER
K225	245789	AC66-30547A	LEVER, UP/DOWN ASSEMBLY
K225	245789	AC66-30547A	LEVER, UP/DOWN ASSEMBLY
K240	245796	AC66-30538A	LEVER, TENSION ASSEMBLY
K240	245796	AC66-30538A	LEVER, TENSION ASSEMBLY
K248	245797	AC61-60554A	SPRING TENSION LEVER
K248	245797	AC61-60554A	SPRING TENSION LEVER
K250	245798	AC63-12029A	BRAKE, BAND ASSEMBLY
K250	245798	AC63-12029A	BRAKE, BAND ASSEMBLY
K330	245781	AC66-30550A	BRAKE, LEVER ASSEMBLY
K330	245781	AC66-30550A	BRAKE, LEVER ASSEMBLY
K340	245782	AC66-30549A	BRAKE, LEVER ASSEMBLY
K340	245782	AC66-30549A	BRAKE, LEVER ASSEMBLY
K350	245783	AC61-60564A	SPRING, TENSION
K350	245783	AC61-60564A	SPRING, TENSION
K490	245807	AC61-21010B	HOLDER, CASS ASSEMBLY
K490	245807	AC61-21010B	HOLDER, CASS ASSEMBLY
K502	245807	AC61-60561A	SPRING
K502	245807	AC61-60561A	SPRING
K530	245809	AC66-30546A	LEVER, ARM ASSEMBLY
K530	245809	AC66-30546A	LEVER, ARM ASSEMBLY
K546	245810	AC61-50658A	GUIDE, CASS DOOR
K546	245810	AC61-50658A	GUIDE, CASS DOOR
RMT	251390	AC59-00002K	TRANSMITTER, REMOTE

VRD120HF

ELECTRICAL COMPONENTS (A)

BD1SF1	218952	AC27-92001M	COIL
BD1SF2	218952	AC27-92001M	COIL
BD1SS1	222860	3301-000297	BEAD
BD1SS2	218952	AC27-92001M	COIL
BD1SS5	218952	AC27-92001M	COIL
C1P101	245687	2401-001730	CAP LYTC 10UF M 50V
C1P102	245704	2401-002144	CAP LYTC 47UF M 16V
C1P103	245688	2401-002036	CAP LYTC 1UF M 50V
C1P104	245689	2401-002075	CAP LYTC 4.7UF M 50V
C1P105	245704	2401-002144	CAP LYTC 47UF M 16V
C1P106	245704	2401-002144	CAP LYTC 47UF M 16V
C1P108	245689	2401-002075	CAP LYTC 4.7UF M 50V
C1P109	245704	2401-002144	CAP LYTC 47UF M 16V
C1P112	245689	2401-002075	CAP LYTC 4.7UF M 50V
C1P113	251305	2401-001573	CAP LYTC 47UF M 50V
C1P202	245704	2401-002144	CAP LYTC 47UF M 16V
C1P204	245689	2401-002075	CAP LYTC 4.7UF M 50V
C1P205	245704	2401-002144	CAP LYTC 47UF M 16V
C1P206	245704	2401-002144	CAP LYTC 47UF M 16V

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
C1P212	245689	2401-002075	CAP LYTC 4.7UF M 50V
C1SD11	251310	2401-003380	CAP LYTC 82UF M 200V
C1SR11	245690	2401-001235	CAP LYTC 4.7UF M 250V
C1SR12	194339	2401-000905	CAP LYTC 22UF 16V
C1SR13	251306	2301-000180	CAP POLY .018UF 100V
C1SR14	219012	2301-000417	CAP POLY .024UF J 50V
C1SR15	245691	2301-000423	CAP POLY 3.3NF J 100V
C1SR16	240732	2201-000930	CAPCD 22PF 500V
C1SS01	246096	2305-001021	CAP .1UF M 275V
C1SS02	164882	2201000795	CAPCD .01UF K 400V
C1SS03	246111	2201-000812	CAPCD 0022UF M 400V
C1SS04	215400	2201-000916	CAPCD 100PF K 400V
C1SS31	157115	2401000385	CAP LYTC 10UF 100V
C1SS32	245692	2401-001126	CAP LYTC 330UF M 25V
C1SS33	201162	2401002162	CAP LYTC 1000UF M 25V
C1SS34	245692	2401-001126	CAP LYTC 330UF M 25V
C1SS35	251311	2401-001992	CAP LYTC 2200UF M 10V
C1SS36	245693	2401-003059	CAP LYTC 1000UF M 16V
C1SS37	251305	2401-001573	CAP LYTC 47UF M 50V
C1SS38	227898	2401001479	CAP LYTC 47UF M 10V
C1SS39	186754	2301000129	CAP POLY 100NF J 50V
C1SS40	151500	2301000383	CAP POLY .01UF J 50V
C1SS63	201162	2401002162	CAP LYTC 1000UF M 25V
C1SS64	245692	2401-001126	CAP LYTC 330UF M 25V
C3101	245694	2203000476	CAPCC 1UF Z 16V
C3102	152267	2401-001507	CAP LYTC 47UF 16V
C3103	222780	2203-000192	CAPCC .1UF Z 50V
C3104	245696	2203-001721	CAPCC 360PF J 50V
C3105	193586	2401-001915	CAP LYTC 1UF 50V
C3106	251280	2203-000408	CAPCC 180PF J 50V
C3107	251281	2203-000555	CAPCC 20PF J 50V
C3109	243245	2401-000922	CAP LYTC 22UF M 16V
C3110	222780	2203-000192	CAPCC .1UF Z 50V
C3111	197059	2203-000260	CAPCC .01UF 50V
C3112	245694	2203000476	CAPCC 1UF Z 16V
C3113	214962	2203-000609	CAPCC .022UF K 50V
C3114	245697	2401-000407	CAP LYTC 10UF M 16V
C3115	193586	2401-001915	CAP LYTC 1UF 50V
C3116	193586	2401-001915	CAP LYTC 1UF 50V
C3117	245694	2203000476	CAPCC 1UF Z 16V
C3118	245700	2401-000598	CAP LYTC 1UF M 50V
C3119	186999	2202000797	CAPCD .01UF 30% 16V
C3120	186999	2202000797	CAPCD .01UF 30% 16V
C3121	222780	2203-000192	CAPCC .1UF Z 50V
C3122	147624	2401-001545	CAP LYTC 47UF 25V
C3123	245701	2202-002037	CAPCC .1UF M 50V
C3124	186763	2401002165	CAP LYTC 100UF M 16V
C3125	245694	2203000476	CAPCC 1UF Z 16V
C3126	245694	2203000476	CAPCC 1UF Z 16V
C3127	245702	2203-000989	CAPCC 47NF K 50V
C3129	245694	2203000476	CAPCC 1UF Z 16V
C3130	197059	2203-000260	CAPCC .01UF 50V
C3131	245694	2203000476	CAPCC 1UF Z 16V

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
C3132	245703	2401-000414	CAP LYTC 10UF M 16V
C3133	222780	2203-000192	CAPCC .1UF Z 50V
C3134	245702	2203-000989	CAPCC 47NF K 50V
C3135	245702	2203-000989	CAPCC 47NF K 50V
C3136	222780	2203-000192	CAPCC .1UF Z 50V
C3137	147624	2401-001545	CAP LYTC 47UF 25V
C3138	245705	2401-000913	CAP LYTC 22UF M 16V
C3139	245689	2401-002075	CAP LYTC 4.7UF M 50V
C3141	222780	2203-000192	CAPCC .1UF Z 50V
C3142	147624	2401-001545	CAP LYTC 47UF 25V
C3143	245836	2203-001724	CAPCC 4.7UF 16V
C3144	229155	2203-001214	CAPCC .0082UF K 50V
C3145	245707	2301-001014	CAPCF 6.8NF J 50V
C3146	197059	2203-000260	CAPCC .01UF 50V
C3147	222728	2007-000029	RES CCF 1/10W 5% 0R
C3149	251282	2203-001077	CAPCC 56PF J 50V
C3150	245704	2401-002144	CAP LYTC 47UF M 16V
C3151	197059	2203-000260	CAPCC .01UF 50V
C3152	245708	2301-000253	CAPCF 39NF J 100V
C3153	222780	2203000192	CAPCC .1UF Z 50V
C3156	197059	2203-000260	CAPCC .01UF 50V
C3157	245687	2401-001730	CAP LYTC 10UF M 50V
C3158	245709	2203-000495	CAPCC 2.2NF K 50V
C3159	215181	2203-001665	CAPCC .560UF K 50V
C3160	242991	2401-002299	CAP LYTC 4.7UF M 50V
C3161	245694	2203000476	CAPCC 1UF Z 16V
C3162	197059	2203-000260	CAPCC .01UF 50V
C3163	197059	2203-000260	CAPCC .01UF 50V
C3164	197059	2203-000260	CAPCC .01UF 50V
C3165	186999	2202000797	CAPCD .01UF 30% 16V
C3166	245701	2202-002037	CAPCC .1UF M 50V
C3168	222780	2203-000192	CAPCC .1UF Z 50V
C3169	245687	2401-001730	CAP LYTC 10UF M 50V
C3171	197059	2203-000260	CAPCC .01UF 50V
C3174	197059	2203-000260	CAPCC .01UF 50V
C3175	197059	2203-000260	CAPCC .01UF 50V
C3301	245700	2401-000598	CAP LYTC 1UF M 50V
C3302	245701	2202-002037	CAPCC .1UF M 50V
C3303	245701	2202-002037	CAPCC .1UF M 50V
C3304	245701	2202-002037	CAPCC .1UF M 50V
C3305	186999	2202000797	CAPCD .01UF 30% 16V
C3306	245694	2203000476	CAPCC 1UF Z 16V
C3307	147624	2401-001545	CAP LYTC 47UF 25V
C3308	245760	2202-000173	CAPCD .001UF K 50V
C3309	245701	2202-002037	CAPCC .1UF M 50V
C3310	147624	2401-001545	CAP LYTC 47UF 25V
C3312	249170	2203-000170	CAPCC .0018UF K 50V
C3313	230477	2203-001579	CAPCC .015UF K 50V
C3314	230477	2203-001579	CAPCC .015UF K 50V
C3317	186999	2202000797	CAPCD .01UF 30% 16V
C3318	186763	2401002165	CAP LYTC 100UF M 16V
C5101	245703	2401-000414	CAP LYTC 10UF M 16V
C5102	245700	2401-000598	CAP LYTC 1UF M 50V

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
C5103	194339	2401000918	CAP LYTC 22UF 16V	C6155	197059	2203-000260	CAPCC .01UF 50V
C5104	242991	2401-002299	CAP LYTC 4.7UF M 50V	C6156	147624	2401-001545	CAP LYTC 47UF 25V
C5105	197059	2203-000260	CAPCC .01UF 50V	C6157	147624	2401-001545	CAP LYTC 47UF 25V
C5106	245705	2401-000913	CAP LYTC 22UF M 16V	C6158	197059	2203-000260	CAPCC .01UF 50V
C5107	245705	2401-000913	CAP LYTC 22UF M 16V	C6159	186999	2202000797	CAPCD .01UF 30% 16V
C5108	245835	2203-000891	CAPCC .0047UF K 50V	C6160	147624	2401-001545	CAP LYTC 47UF 25V
C5109	233750	2203-000716	CAPACITOR	C6161	245701	2202-002037	CAPCC .1UF M 50V
C5110	147624	2401-001545	CAP LYTC 47UF 25V	C6166	186999	2202000797	CAPCD .01UF 30% 16V
C5111	222780	2203-000192	CAPCC .1UF Z 50V	C6167	245709	2203-000495	CAPCC .0022UF K 50V
C5112	215181	2203-001665	CAPCC .560UF K 50V	C6CM01	147624	2401-001545	CAP LYTC 47UF 25V
C5113	251364	2203-000126	CAPCC .0012UF K 50V	C6CM02	186999	2202000797	CAPCD .01UF 30% 16V
C5114	245694	2203000476	CAPCC 1UF Z 16V	C6CM03	233750	2203-000716	CAPCC .0033UF K 50V
C5115	245700	2401-000598	CAP LYTC 1UF M 50V	C6CM04	245701	2202-002037	CAPCC .1UF M 50V
C5116	233750	2203-000716	CAPCC .0033UF K 50V	C6CM05	186999	2202000797	CAPCD .01UF 30% 16V
C5117	245835	2203-000891	CAPCC .0047UF K 50V	C6CM06	231998	2203-000727	CAPCC 3900PF K 50V
C5118	194339	2401000918	CAP LYTC 22UF 16V	C6CM07	222780	2203-000192	CAPCC .1UF Z 50V
C5119	197059	2203-000260	CAPCC .01UF 50V	C6CM08	197059	2203-000260	CAPCC .01UF 50V
C5120	245836	2203-001724	CAPCC 4.7UF 16V	C6CM09	186999	2202000797	CAPCD .01UF 30% 16V
C5121	245705	2401-000913	CAP LYTC 22UF M 16V	C6CM11	197059	2203-000260	CAPCC .01UF 50V
C5122	245694	2203000476	CAPCC 1UF Z 16V	C6CM12	222780	2203-000192	CAPCC .1UF Z 50V
C5123	222780	2203-000192	CAPCC .1UF Z 50V	C6CM13	222780	2203-000192	CAPCC .1UF Z 50V
C5124	178991	2401001250	CAP LYTC 4.7UF M 35V	C6CM14	222780	2203-000192	CAPCC .1UF Z 50V
C5125	178991	2401001250	CAP LYTC 4.7UF M 35V	C6CM15	187762	2401001931	CAP LYTC .22UF 50V
C5126	152267	2401-001507	CAP LYTC 47UF 16V	C6CM16	197059	2203-000260	CAPCC .01UF 50V
C5127	245701	2202-002037	CAPCC .1UF M 50V	C6CM17	197059	2203-000260	CAPCC .01UF 50V
C5132	197059	2203-000260	CAPCC .01UF 50V	C6CM18	197059	2203-000260	CAPCC .01UF 50V
C5170	245700	2401-000598	CAP LYTC 1UF M 50V	C6CM19	222780	2203-000192	CAPCC .1UF Z 50V
C6101	222780	2203-000192	CAPCC .1UF Z 50V	C6CM20	248691	2203-000858	CAPCC 39PF J NPO 50V
C6113	247351	2202-002055	CAPCC .047UF +80-2% Y5V 50V	C6CM21	245700	2401-000598	CAP LYTC 1UF M 50V
C6114	197059	2203-000260	CAPCC .01UF 50V	C6CM22	245710	2203-000444	CAPCC .001UF K 50V
C6117	251284	2203-000634	CAPCC 22PF J 50V	C6CM23	245847	2401-000661	CAP LYTC 2.2UF M 50V
C6118	251284	2203-000634	CAPCC 22PF J 50V	C6CM24	222780	2203-000192	CAPCC .1UF Z 50V
C6122	245701	2202-002037	CAPCC .1UF M 50V	C6CM25	245697	2401-000407	CAP LYTC 10UF M 16V
C6124	242991	2401-002299	CAP LYTC 4.7UF M 50V	C701	186999	2202000797	CAPCD .01UF 30% 16V
C6125	245701	2202-002037	CAPCC .1UF M 50V	C702	186763	2401002165	CAP LYTC 100UF M 16V
C6126	147624	2401-001545	CAP LYTC 47UF 25V	CN101	251312	3711-000666	CONNECTOR 12P
C6127	186999	2202000797	CAPCD .01UF 30% 16V	CN101B	N/S/P	AC39-00042A	CONNECTOR ASY 12P
C6128	147624	2401-001545	CAP LYTC 47UF 25V	CN1SS1	240691	3711-000178	CONNECTOR
C6129	197059	2203-000260	CAPCC .01UF 50V	CN3101	233752	3708-000391	CONNECTOR
C6130	186763	2401002165	CAP LYTC 100UF M 16V	CN3102	229171	3711-002445	CONNECTOR
C6132	251285	2203-000239	CAPCC 100PF J 50V	CN3103	245714	3708-001302	CONNECTOR
C6133	245701	2202-002037	CAPCC .1UF M 50V	CN313B	245715	3809-001110	CABLE FLAT 7P
C6134	214943	2203-000938	CAPCC 470PF K 50V	CN5101	251313	3711-000596	CONNECTOR 10P
C6136	197059	2203-000260	CAPCC .01UF 50V	CN511B	N/S/P	AC39-00013A	CONNECTOR ASY
C6137	197059	2203-000260	CAPCC .01UF 50V	CN6101	245716	AC39-20817S	CONNECTOR ASSEMBLY
C6138	245701	2202-002037	CAPCC .1UF M 50V	CN6102	251371	3711-000606	CONNECTOR 11P
C6140	245713	2203-000802	CAPCC .033UF K 50V	CN6104	245717	3711-003749	CONNECTOR 8P
C6141	245702	2203-000989	CAPCC .047UF K 50V	CN6105	245718	3708-001163	CONNECTOR 5P
C6147	232586	2203-001143	CAPCC .068UF K 50V	CN612B	N/S/P	AC39-00043A	CONNECTOR ASY 11P
C6148	232586	2203-001143	CAPCC .068UF K 50V	CN615B	245719	3809-001112	CABLE FLAT 5P
C6150	147624	2401-001545	CAP LYTC 47UF 25V	CN701	251372	3711-004320	CONNECTOR 27P
C6151	197059	2203-000260	CAPCC .01UF 50V	D1P101	240679	0401-000101	DIODE
				D1P102	155276	0402-000127	DIODE

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
D1P103	155276	0402-000127	DIODE	L3101	227549	2701-000002	COIL
D1P104	155276	0402-000127	DIODE	L3102	186692	2702000108	INDUCTOR
D1P105	155276	0402-000127	DIODE	L3103	186692	2702000108	INDUCTOR
D1P108	240679	0401-000101	DIODE	L3104	227549	2701-000002	COIL
D1P109	240679	0401-000101	DIODE	L3105	227549	2701-000002	COIL
D1P201	240679	0401-000101	DIODE	L3106	196197	2702-000120	COIL
D1P202	155276	0402-000127	DIODE	L3107	186692	2702000108	INDUCTOR
D1P203	155276	0402-000127	DIODE	L3108	251308	2702-000163	COIL 470UH
D1P204	155276	0402-000127	DIODE	L3301	227549	2701-000002	COIL
D1P205	155276	0402-000127	DIODE	L3303	227549	2701-000002	COIL
D1P209	240679	0401-000101	DIODE	L5101	186692	2702000108	INDUCTOR
D1SD11	240679	0401-000101	DIODE	L5102	227549	2701-000002	COIL
D1SD31	240679	0401-000101	DIODE	L6101	227549	2701-000002	COIL
D1SD32	240679	0401-000101	DIODE	L6CM01	227549	2701-000002	COIL
D1SR11	240679	0401-000101	DIODE	L6CM02	240686	2701-000195	INDUCTOR
D1SR31	240679	0401-000101	DIODE	L701	227549	2701-000002	COIL
D1SR32	240679	0401-000101	DIODE	LD6101	245738	0601-000517	DIODE LED
D1SS01	245722	0402-001196	DIODE RECTIFIER 600V	LD611A	247767	AC61-21009A	HOLDER LED
D1SS02	245722	0402-001196	DIODE RECTIFIER 600V	PT1SD1	251322	AC26-00007A	TRANSFORMER
D1SS03	245722	0402-001196	DIODE RECTIFIER 600V	PT6101	251323	0604-001206	SENSOR PHOTO
D1SS04	245722	0402-001196	DIODE RECTIFIER 600V	PT6102	251323	0604-001206	SENSOR PHOTO
D1SS11	251307	0402-000012	DIODE	Q1P101	196201	501000616	TRANSISTOR
D1SS31	245724	0402-001195	DIODE RECTIFIER 400V	Q1P102	196201	501000616	TRANSISTOR
D1SS32	245725	0402-001194	DIODE RECTIFIER 200V	Q1P104	196201	501000616	TRANSISTOR
D1SS33	232353	404-000128	DIODE	Q1P107	196201	501000616	TRANSISTOR
D1SS34	245724	0402-001195	DIODE RECTIFIER 400V	Q1P108	186544	0504-000142	TRANSISTOR
D1SS62	245725	0402-001194	DIODE RECTIFIER 200V	Q1P109	186642	0501-000398	TRANSISTOR
D3101	240679	0401-000101	DIODE	Q1P201	196201	501000616	TRANSISTOR
D3301	240679	0401-000101	DIODE	Q1P202	196201	501000616	TRANSISTOR
D3302	240679	0401-000101	DIODE	Q1P207	196201	501000616	TRANSISTOR
D6101	155276	0402-000127	DIODE	Q1SR11	245741	0502-001123	TRANSISTOR POWER
D6104	240679	0401-000101	DIODE	Q1SR12	212671	0501-000442	TRANSISTOR
D701	155276	0402-000127	DIODE	Q3101	245820	501-000303	TRANSISTOR
F1SD01	245727	3601-001122	FUSE 250V	Q3102	245820	501-000303	TRANSISTOR
FC1SS1	N/S/P	3602-000103	FUSE CLIP	Q3103	186642	0501-000398	TRANSISTOR
FC1SS2	N/S/P	3602-000103	FUSE CLIP	Q3104	245820	501-000303	TRANSISTOR
FL3101	245728	AC27-80100C	COIL	Q3105	212671	0501-000442	TRANSISTOR
GP6101	N/S/P	AC61-30181A	PLATE GROUND	Q3106	245820	501-000303	TRANSISTOR
HSD33A	N/S/P	AC62-32001B	HEATSINK	Q3107	212671	0501-000442	TRANSISTOR
HSQ11A	N/S/P	AH62-30122A	HEATSINK	Q3108	212671	0501-000442	TRANSISTOR
IC1SS1	245729	0604-001028	IC PHOTO COUPLER	Q3111	186642	0501-000398	TRANSISTOR
IC1SS2	240682	AC14-12006D	IC	Q3301	186544	0504-000142	TRANSISTOR
IC3101	248650	1204-001644	IC VIDEO PROCESS LA71069M	Q3302	186642	0501-000398	TRANSISTOR
IC3301	251321	AC14-12015S	IC	Q3303	186544	0504-000142	TRANSISTOR
IC5101	245838	1204-001479	IC AUDIO PROCESSOR	Q3304	243076	0504-000119	TRANSISTOR DIGITAL
IC6101	251286	AC09-00164A	IC	Q3305	243076	0504-000119	TRANSISTOR DIGITAL
IC6102	245732	1003-001162	IC MOTOR DRIVER KA3082	Q3306	186642	0501-000398	TRANSISTOR
IC6CM1	245849	1204-001331	IC SIGNAL PROCESSOR	Q3307	186642	0501-000398	TRANSISTOR
L1P201	227549	2701-000002	COIL	Q3308	243076	0504-000119	TRANSISTOR DIGITAL
L1SS01	246107	AC27-92001Q	COIL LINE FILTER	Q6CM01	186642	0501-000398	TRANSISTOR
L1SS31	234055	AC27-12001N	COIL	Q711	245820	501-000303	TRANSISTOR
L1SS32	234055	AC27-12001N	COIL	Q712	245820	501-000303	TRANSISTOR
L1SS61	234055	AC27-12001N	COIL	Q713	245820	501-000303	TRANSISTOR

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
Q714	245820	501-000303	TRANSISTOR	R3127	240722	2007-000844	RES CCF 1/10W 5% 3K
Q715	245820	501-000303	TRANSISTOR	R3129	248653	2007-000518	RES CCF 1/10W 5% 2.7K
Q716	245820	501-000303	TRANSISTOR	R3130	243127	2001-000221	RES CF 1/8W 5% 1.2K
Q717	245820	501-000303	TRANSISTOR	R3131	173939	2001000878	RES CF 1/8W 5% 6.2K
Q718	245820	501-000303	TRANSISTOR	R3132	251297	2007-001224	RES CCF 1/10W 5% 9.1K
R1P101	245742	2001-000855	RES CF 1/4W 5% 560R	R3134	251293	2007-000586	RES CCF 1/10W 5% 22K
R1P103	245839	2001-000034	RES CF 1/4W J 220R	R3135	249427	2007-000931	RES CCF 1/10W 5% 470R
R1P104	243079	2001-000515	RES CF 1/8W 5% 220R	R3136	207993	2007-000267	RES CCF 1/10W 5% 1.8K
R1P109	245743	2001-000036	RES CF 1/4W 5% 330R	R3137	251298	2007-000502	RES CCF 1/10W 5% 2.2R
R1P110	245839	2001-000034	RES CF 1/4W J 220R	R3138	251299	2007-000449	RES CCF 1/10W 5% 180R
R1P201	240778	2001-000449	RES CF 1/8W 5% 2.2K	R3139	175890	2001000613	RES CF 1/8W 5% 3.9K
R1P203	245839	2001-000034	RES CF 1/4W J 220R	R3140	175890	2001000613	RES CF 1/8W 5% 3.9K
R1P210	245839	2001-000034	RES CF 1/4W J 220R	R3141	175054	2001000522	RES CF 1/8W 5% 22K
R1SD11	246692	2001-001000	RES MF 1/8W 5% 82K	R3142	245989	2007-000300	RES CCF 1/10W 5% 10K
R1SD12	188012	2001-000628	RES CF 1/8W 5% 300R	R3144	243125	2001-000331	RES CF 1/8W 5% 12K
R1SD13	246692	2001-001000	RES MF 1/8W 5% 82K	R3145	250461	2007-000572	RES CCF 1/10W 5% 220R
R1SD14	246692	2001-001000	RES MF 1/8W 5% 82K	R3146	251300	2007-000774	RES CCF 1/10W 5% 33K
R1SD15	246692	2001-001000	RES MF 1/8W 5% 82K	R3147	240719	2007-000468	RES CCF 1/10W 5% 1K
R1SD31	175325	2001000281	RES CF 1/8W 5% 100R	R3148	251288	2007-000872	RES CCF 1/10W J 4.7K
R1SD32	175412	2001000780	RES CF 1/8W 5% 470R	R3149	251301	2007-001001	RES CCF 1/10W 5% 510R
R1SF01	246109	2006-000262	RES 2W 10% 27R	R3150	251301	2007-001001	RES CCF 1/10W 5% 510R
R1SR01	203072	2002-000320	RES COMP 1/2W 10% 1.8M	R3152	251302	2007-000981	RES CCF 1/10W 5% 6K
R1SR11	251324	2006-000259	RES CEMENT 2W 10% 0.47R	R3153	245989	2007-000300	RES CCF 1/10W 5% 10K
R1SR12	181366	2003000314	RES MF 2W 5% 47R	R3154	248673	2007-000757	RES CCF 1/10W 5% 330K
R1SR13	181366	2003000314	RES MF 2W 5% 47R	R3155	161223	2001000429	RES CF 1/8W 5% 1K
R1SR14	175045	2001000003	RES CF 1/8W 5% 330R	R3156	251303	2007-000565	RES CCF 1/10W 5% 220K
R1SR15	175413	2001000734	RES CF 1/8W 5% 4.7K	R3157	251303	2007-000565	RES CCF 1/10W 5% 220K
R1SS11	182367	2006000273	RES CEMENT 2W 5% 27K	R3158	159643	2001000008	RES CF 1/8W 5% 15K
R1SS13	178621	2003000148	RES MF 2W 5% 100R	R3159	248674	2007-000738	RES CCF 1/10W 5% 30K
R1SS31	155045	2001000440	RES CF 1/8W 5% 1R	R3160	245748	2001-000977	RES CF 1/8W 5% 8.2K
R1SS32	161223	2001000429	RES CF 1/8W 5% 1K	R3161	240723	2007-000964	RES CCF 1/10W 5% 5.1K
R1SS33	173977	2004000869	RES MF 1/8W 5% 3K	R3162	175322	2001000786	RES CF 1/8W 5% 47K
R1SS34	240733	2004-000459	RES MF 1/8W 1% 2.2K	R3167	246765	2001-000595	RES CF 1/8W 5% 3.3M
R3101	251287	2007-000671	RES CCF 1/10W J 2K	R3195	240721	2007-000941	RES CCF 1/10W 5% 47K
R3102	251288	2007-000872	RES CCF 1/10W J 4.7K	R3197	245989	2007-000300	RES CCF 1/10W 5% 10K
R3103	251289	2007-000241	RES CCF 1/10W 5% 1.5K	R3199	175322	2001000786	RES CF 1/8W 5% 47K
R3104	251290	2007-000653	RES CCF 1/10W 5% 27K	R3302	175322	2001000786	RES CF 1/8W 5% 47K
R3105	176648	2001000472	RES CF 1/8W 5% 2.7K	R3303	177743	2001-000924	RES CF 1/8W 5% 680R
R3106	251291	2007-000511	RES CCF 1/10W 5% 2.4K	R3305	240721	2007-000941	RES CCF 1/10W 5% 47K
R3107	207993	2007-000267	RES CCF 1/10W 5% 1.8K	R3308	243085	2001-000563	RES CF 1/8W 5% 27K
R3108	251292	2007-000002	RES CCF 1/10W 5% 75K	R3309	246692	2001-001000	RES MF 1/8W 5% 82K
R3109	251293	2007-000586	RES CCF 1/10W 5% 22K	R3310	161033	2001000890	RES CF 1/8W 5% 6.8K
R3110	251294	2007-001177	RES CCF 1/10W 5% 8.2K	R3311	161223	2001000429	RES CF 1/8W 5% 1K
R3111	251295	2007-001071	RES 1/10W 5% 8.2K	R3312	177535	2001000005	RES CF 390R 1/8W 5%
R3112	240719	2007-000468	RES CCF 1/10W 5% 1K	R3313	161223	2001000429	RES CF 1/8W 5% 1K
R3113	240778	2001-000449	RES CF 1/8W 5% 2.2K	R3314	246764	2001-000006	RES CF 1/8W 5% 2.4K
R3114	251296	2007-001195	RES 1/10W 5% 820K	R3315	175413	2001000734	RES CF 1/8W 5% 4.7K
R3115	251289	2007-000241	RES CCF 1/10W 5% 1.5K	R3316	161223	2001000429	RES CF 1/8W 5% 1K
R3116	207993	2007-000267	RES CCF 1/10W 5% 1.8K	R3317	179955	2001000702	RES CF 1/8W 5% 39K
R3117	251289	2007-000241	RES CCF 1/10W 5% 1.5K	R5103	251365	2007-000593	RES CCF 1/10W 5% 22R
R3118	251294	2007-001177	RES CCF 1/10W 5% 8.2K	R5104	251366	2007-000703	RES CCF 1/10W 5% 3.6K
R3120	245989	2007-000300	RES CCF 1/10W 5% 10K	R5107	173939	2001000878	RES CF 1/8W 5% 6.2K
R3126	240737	2001-000454	RES CF 1/8W 5% 2.2M	R5108	157339	2001000577	RES CF 1/8W 5% 2K

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
R5109	173939	2001000878	RES CF 1/8W 5% 6.2K	R6146	245989	2007-000300	RES CCF 1/10W 5% 10K
R5110	152004	2001000766	RES CF 1/8W 5% 43K	R6147	251288	2007-000872	RES CCF 1/10W J 4.7K
R5111	175325	2001000281	RES CF 1/8W 5% 100R	R6148	243123	2001-000864	RES CF 1/8W 5% 56K
R5114	240721	2007-000941	RES CCF 1/10W 5% 47K	R6149	230857	2001-000660	RES CF 1/8W 5% 33K
R5115	175325	2001000281	RES CF 1/8W 5% 100R	R6150	243085	2001-000563	RES CF 1/8W 5% 27K
R5116	175322	2001000786	RES CF 1/8W 5% 47K	R6151	161223	2001000429	RES CF 1/8W 5% 1K
R5117	245988	2007-001055	RES CCF 1/10W 5% 6.2K	R6153	243123	2001-000864	RES CF 1/8W 5% 56K
R5118	152004	2001000766	RES CF 1/8W 5% 43K	R6164	161223	2001000429	RES CF 1/8W 5% 1K
R5121	243125	2001-000331	RES CF 1/8W 5% 12K	R6168	161223	2001000429	RES CF 1/8W 5% 1K
R5122	230857	2001-000660	RES CF 1/8W 5% 33K	R6169	161223	2001000429	RES CF 1/8W 5% 1K
R5123	251303	2007-000565	RES CCF 1/10W 5% 220K	R6170	161223	2001000429	RES CF 1/8W 5% 1K
R5124	248653	2007-000518	RES CCF 1/10W 5% 2.7K	R6171	230857	2001-000660	RES CF 1/8W 5% 33K
R5125	251287	2007-000671	RES CCF 1/10W J 2K	R6172	230493	2003-000259	RES MF 2W 5% 3.9R
R5126	245986	2007-000290	RES CCF 1/10W 5% 100R	R6173	161223	2001000429	RES CF 1/8W 5% 1K
R6101	243132	2001-000837	RES CF 1/8W 5% 51K	R6174	175322	2001000786	RES CF 1/8W 5% 47K
R6102	240725	2007-001039	RES CCF 1/10W 5% 56K	R6188	248658	2001-000111	RES CF1/4W 5% 150R
R6103	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM02	245989	2007-000300	RES CCF 1/10W 5% 10K
R6104	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM03	240719	2007-000468	RES CCF 1/10W 5% 1K
R6105	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM04	240721	2007-000941	RES CCF 1/10W 5% 47K
R6106	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM05	245989	2007-000300	RES CCF 1/10W 5% 10K
R6107	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM06	207993	2007-000267	RES CCF 1/10W 5% 1.8K
R6108	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM07	179955	2001000702	RES CF 1/8W 5% 39K
R6109	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM08	251290	2007-000653	RES CCF 1/10W 5% 27K
R6110	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM09	251290	2007-000653	RES CCF 1/10W 5% 27K
R6111	240725	2007-001039	RES CCF 1/10W 5% 56K	R6CM10	240721	2007-000941	RES CCF 1/10W 5% 47K
R6112	175054	2001000522	RES CF 1/8W 5% 22K	R6CM11	240721	2007-000941	RES CCF 1/10W 5% 47K
R6113	243079	2001-000515	RES CF 1/8W 5% 220R	R6CM14	207993	2007-000267	RES CCF 1/10W 5% 1.8K
R6114	157336	2001-000290	RES CF 1/8W 5% 10K	R6CM15	251304	2007-000395	RES CCF 1/10W 5% 27K
R6115	157336	2001-000290	RES CF 1/8W 5% 10K	R6CM16	251304	2007-000395	RES CCF 1/10W 5% 27K
R6116	175054	2001000522	RES CF 1/8W 5% 22K	R6CM17	240719	2007-000468	RES CCF 1/10W 5% 1K
R6117	243079	2001-000515	RES CF 1/8W 5% 220R	R711	157336	2001-000290	RES CF 1/8W 5% 10K
R6122	161223	2001000429	RES CF 1/8W 5% 1K	R712	157336	2001-000290	RES CF 1/8W 5% 10K
R6123	157336	2001-000290	RES CF 1/8W 5% 10K	R713	157336	2001-000290	RES CF 1/8W 5% 10K
R6125	161223	2001000429	RES CF 1/8W 5% 1K	R714	157336	2001-000290	RES CF 1/8W 5% 10K
R6127	161223	2001000429	RES CF 1/8W 5% 1K	R715	157336	2001-000290	RES CF 1/8W 5% 10K
R6128	157336	2001-000290	RES CF 1/8W 5% 10K	R716	157336	2001-000290	RES CF 1/8W 5% 10K
R6129	157336	2001-000290	RES CF 1/8W 5% 10K	R717	157336	2001-000290	RES CF 1/8W 5% 10K
R6130	161223	2001000429	RES CF 1/8W 5% 1K	R718	157336	2001-000290	RES CF 1/8W 5% 10K
R6131	250461	2007-000572	RES CCF 1/10W 5% 220R	S6101	245750	0603-001011	TRANSISTOR PHOTO
R6132	243132	2001-000837	RES CF 1/8W 5% 51K	S6101A	248698	AC61-21008A	HOLDER SENSOR
R6133	250461	2007-000572	RES CCF 1/10W 5% 220R	S6102	245750	0603-001011	TRANSISTOR PHOTO
R6134	175054	2001000522	RES CF 1/8W 5% 22K	S6102A	248698	AC61-21008A	HOLDER SENSOR
R6135	248674	2007-000738	RES CCF 1/10W 5% 30K	SC1SS1	N/S/P	AC63-00010A	SHIELD
R6136	243123	2001-000864	RES CF 1/8W 5% 56K	SCD33A	222668	6003-000283	SCREW
R6137	161223	2001000429	RES CF 1/8W 5% 1K	SCQ11A	222668	6003-000283	SCREW
R6138	243132	2001-000837	RES CF 1/8W 5% 51K	SW6102	245752	AC34-20100B	SWITCH
R6139	161223	2001000429	RES CF 1/8W 5% 1K	SW6103	245753	AC34-20100A	SWITCH
R6140	161223	2001000429	RES CF 1/8W 5% 1K	TP01	251373	3711-001054	CONNECTOR 6P
R6141	161223	2001000429	RES CF 1/8W 5% 1K	TP3101	N/S/P	3811-000389	WIRE
R6142	157336	2001-000290	RES CF 1/8W 5% 10K	TP6101	N/S/P	3811-000389	WIRE
R6143	251288	2007-000872	RES CCF 1/10W J 4.7K	TP6102	N/S/P	3811-000389	WIRE
R6144	245989	2007-000300	RES CCF 1/10W 5% 10K	TP6103	N/S/P	3811-000389	WIRE
R6145	251288	2007-000872	RES CCF 1/10W J 4.7K	VA1SS1	245755	1405-001026	VARIATOR 470V

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
XT3101	243148	2801-003610	CRISTAL 3.57MHZ	C3243	245836	2203-001724	CAPCC 4.7UF 16V
XT6101	245756	2801-003139	CRYSTAL 8MHZ	C3244	229155	2203-001214	CAPACITOR
ZD1P01	215445	403-000390	DIODE	C3245	245707	2301-001014	CAPCF 6.8NF J 50V
ZD1P02	245758	0403-000717	DIODE ZENER	C3246	197059	2203-000260	CAPCC .01UF 50V
ZD1P03	245841	0403-000720	DIODE ZENER	C3247	222728	2007-000029	RES CCF 1/10W 5% 0R
ZD1P05	245759	0403-001211	DIODE ZENER	C3249	251282	2203-001077	CAPCC 56PF J 50V
ZD1P06	251309	0403-001141	DIODE ZENER	C3250	245704	2401-002144	CAP LYTC 47UF M 16V
ZD1P22	245758	0403-000717	DIODE ZENER	C3251	197059	2203-000260	CAPCC .01UF 50V
ZD1P25	245759	0403-001211	DIODE ZENER	C3252	245708	2301-000253	CAPCF 39NF J 100V
ZD1SR1	212666	403-000571	DIODE ZENER	C3253	222780	2203-000192	CAPCC .1UF Z 50V
ELECTRICAL COMPONENTS (B)				C3256	197059	2203-000260	CAPCC .01UF 50V
C2P101	222780	2203-000192	CAPCC .1UF Z 50V	C3257	245687	2401-001730	CAP LYTC 10UF M 50V
C2P102	245701	2202-002037	CAPCC .1UF M 50V	C3258	245709	2203-000495	CAPCC 2.2NF K 50V
C3201	245694	2203000476	CAPCC 1UF Z 16V	C3259	215181	2203-001665	CAPCC .560UF K 50V
C3202	152267	2401-001507	CAP LYTC 47UF 16V	C3261	245694	2203000476	CAPCC 1UF Z 16V
C3203	222780	2203-000192	CAPCC .1UF Z 50V	C3262	197059	2203-000260	CAPCC .01UF 50V
C3204	245696	2203-001721	CAPCC 360PF J 50V	C3264	197059	2203-000260	CAPCC .01UF 50V
C3205	193586	2401-001915	CAP LYTC 1UF 50V	C3265	186999	2202000797	CAPCD .01UF 30% 16V
C3206	251280	2203-000408	CAPCC 180PF J 50V	C3266	245701	2202-002037	CAPCC .1UF M 50V
C3207	251281	2203-000555	CAPCC 20PF J 50V	C3268	222780	2203-000192	CAPCC .1UF Z 50V
C3209	243245	2401-000922	CAP LYTC 22UF M 16V	C3269	251284	2203-000634	CAPCC 22PF J 50V
C3210	222780	2203-000192	CAPCC .1UF Z 50V	C3270	186999	2202000797	CAPCD .01UF 30% 16V
C3211	197059	2203-000260	CAPCC .01UF 50V	C3271	197059	2203-000260	CAPCC .01UF 50V
C3212	245694	2203000476	CAPCC 1UF Z 16V	C3274	197059	2203-000260	CAPCC .01UF 50V
C3213	214962	2203-000609	CAPCC .022UF K 50V	C3275	197059	2203-000260	CAPCC .01UF 50V
C3214	245697	2401-000407	CAP LYTC 10UF M 16V	C3560	242991	2401-002299	CAP LYTC 4.7UF M 50V
C3215	193586	2401-001915	CAP LYTC 1UF 50V	C401	222780	2203-000192	CAPCC .1UF Z 50V
C3216	193586	2401-001915	CAP LYTC 1UF 50V	C405	245704	2401-002144	CAP LYTC 47UF M 16V
C3217	245694	2203000476	CAPCC 1UF Z 16V	C406	245701	2202-002037	CAPCC .1UF M 50V
C3218	245700	2401-000598	CAP LYTC 1UF M 50V	C407	245701	2202-002037	CAPCC .1UF M 50V
C3219	186999	2202000797	CAPCD .01UF 30% 16V	C4M01	245694	2203000476	CAPCC 1UF Z 16V
C3220	186999	2202000797	CAPCD .01UF 30% 16V	C4M02	251375	2203-001035	CAPCC .0056UF K X7R 50V
C3221	222780	2203-000192	CAPCC .1UF Z 50V	C4M03	245831	2203-000323	CAPCC .012UF K 50V
C3222	147624	2401-001545	CAP LYTC 47UF 25V	C4M04	245694	2203000476	CAPCC 1UF Z 16V
C3223	245701	2202-002037	CAPCC .1UF M 50V	C4M06	245687	2401-001730	CAP LYTC 10UF M 50V
C3224	186763	2401002165	CAP LYTC 100UF M 16V	C4M07	245836	2203-001724	CAPCC 4.7UF 16V
C3225	245694	2203000476	CAPCC 1UF Z 16V	C4M08	245836	2203-001724	CAPCC 4.7UF 16V
C3226	245694	2203000476	CAPCC 1UF Z 16V	C4M09	242991	2401-002299	CAP LYTC 4.7UF M 50V
C3227	245702	2203-000989	CAPCC 47NF K 50V	C4M10	245836	2203-001724	CAPCC 4.7UF 16V
C3229	245694	2203000476	CAPCC 1UF Z 16V	C4M11	163989	2301000408	CAP POLY 4700PF J 50V
C3230	197059	2203-000260	CAPCC .01UF 50V	C4M12	251380	2301-001388	CAP POLY 4700PF J 100V
C3231	245694	2203000476	CAPCC 1UF Z 16V	C4M13	248655	2401-001020	CAP LYTC 3.3UF M 50V
C3232	245703	2401-000414	CAP LYTC 10UF M 16V	C4M14	245836	2203-001724	CAPCC 4.7UF 16V
C3233	222780	2203-000192	CAPCC .1UF Z 50V	C4M15	245703	2401-000414	CAP LYTC 10UF M 16V
C3234	245702	2203-000989	CAPCC 47NF K 50V	C4M16	245694	2203000476	CAPCC 1UF Z 16V
C3235	245702	2203-000989	CAPCC 47NF K 50V	C4M17	245704	2401-002144	CAP LYTC 47UF M 16V
C3236	222780	2203-000192	CAPCC .1UF Z 50V	C4M18	222780	2203-000192	CAPCC .1UF Z 50V
C3237	147624	2401-001545	CAP LYTC 47UF 25V	C4M19	242991	2401-002299	CAP LYTC 4.7UF M 50V
C3238	245705	2401-000913	CAP LYTC 22UF M 16V	C5201	245703	2401-000414	CAP LYTC 10UF M 16V
C3239	245689	2401-002075	CAP LYTC 4.7UF M 50V	C5202	245700	2401-000598	CAP LYTC 1UF M 50V
C3241	222780	2203-000192	CAPCC .1UF Z 50V	C5203	194339	2401000918	CAP LYTC 22UF 16V
C3242	147624	2401-001545	CAP LYTC 47UF 25V	C5204	242991	2401-002299	CAP LYTC 4.7UF M 50V
				C5205	197059	2203-000260	CAPCC .01UF 50V

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
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C5207	245705	2401-000913	CAP LYTC 22UF M 16V
C5208	245835	2203-000891	CAPCC .0047UF K 50V
C5209	233750	2203-000716	CAPCC .0033UF K 50V
C5210	147624	2401-001545	CAP LYTC 47UF 25V
C5211	222780	2203-000192	CAPCC .1UF Z 50V
C5212	215181	2203-001665	CAPCC .560UF K 50V
C5213	251364	2203-000126	CAPCC .0012UF K 50V
C5214	245694	2203000476	CAPCC 1UF Z 16V
C5215	245694	2203000476	CAPCC 1UF Z 16V
C5216	233750	2203-000716	CAPCC .0033UF K 50V
C5217	245835	2203-000891	CAPCC .0047UF K 50V
C5218	194339	2401000918	CAP LYTC 22UF 16V
C5220	245836	2203-001724	CAPCC 4.7UF 16V
C5221	245705	2401-000913	CAP LYTC 22UF M 16V
C5222	245694	2203000476	CAPCC 1UF Z 16V
C5223	222780	2203-000192	CAPCC .1UF Z 50V
C5224	178991	2401001250	CAP LYTC 4.7UF M 35V
C5225	178991	2401001250	CAP LYTC 4.7UF M 35V
C5226	152267	2401-001507	CAP LYTC 47UF 16V
C5227	222780	2203-000192	CAPCC .1UF Z 50V
C5232	197059	2203-000260	CAPCC .01UF 50V
C5233	242987	2202-000121	CAPCD 100PF K 50V
C5234	251285	2203-000239	CAPCC 100PF J 50V
C5235	232351	2203-001193	CAPCC 75PF J NPO 50V
C5270	245700	2401-000598	CAP LYTC 1UF M 50V
C6201	222780	2203-000192	CAPCC .1UF Z 50V
C6202	222780	2203-000192	CAPCC .1UF Z 50V
C6203	197059	2203-000260	CAPCC .01UF 50V
C6204	147624	2401-001545	CAP LYTC 47UF 25V
C6205	251325	2203-001164	CAPCC 68PF J 50V
C6206	245700	2401-000598	CAP LYTC 1UF M 50V
C6207	245700	2401-000598	CAP LYTC 1UF M 50V
C6208	147624	2401-001545	CAP LYTC 47UF 25V
C6209	222780	2203-000192	CAPCC .1UF Z 50V
C6210	251284	2203-000634	CAPCC 22PF J 50V
C6211	251284	2203-000634	CAPCC 22PF J 50V
C6212	251284	2203-000634	CAPCC 22PF J 50V
C6213	245702	2203-000989	CAPCC .047UF K 50V
C6214	197059	2203-000260	CAPCC .01UF 50V
C6215	251284	2203-000634	CAPCC 22PF J 50V
C6216	251284	2203-000634	CAPCC 22PF J 50V
C6217	251284	2203-000634	CAPCC 22PF J 50V
C6218	251284	2203-000634	CAPCC 22PF J 50V
C6219	197059	2203-000260	CAPCC .01UF 50V
C6220	197059	2203-000260	CAPCC .01UF 50V
C6221	245703	2401-000414	CAP LYTC 10UF M 16V
C6222	200004	2401-000199	CAP LYTC 1000UF 6.3V
C6223	251284	2203-000634	CAPCC 22PF J 50V
C6224	194339	2401000918	CAP LYTC 22UF 16V
C6225	245701	2202-002037	CAPCC .1UF M 50V
C6226	147624	2401-001545	CAP LYTC 47UF 25V
C6227	186999	2202000797	CAPCD .01UF 30% 16V

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
C6228	152267	2401-001507	CAP LYTC 47UF 16V
C6229	197059	2203-000260	CAPCC .01UF 50V
C6230	186763	2401002165	CAP LYTC 100UF M 16V
C6232	251285	2203-000239	CAPCC 100PF J 50V
C6233	245701	2202-002037	CAPCC .1UF M 50V
C6234	214943	2203-000938	CAPCC 470PF K 50V
C6236	197059	2203-000260	CAPCC .01UF 50V
C6237	197059	2203-000260	CAPCC .01UF 50V
C6238	245701	2202-002037	CAPCC .1UF M 50V
C6240	245713	2203-000802	CAPCC .033UF K 50V
C6241	245702	2203-000989	CAPCC .047UF K 50V
C6243	251325	2203-001164	CAPCC 68PF J 50V
C6245	230484	2203-000540	CAPCC 200PF J 50V
C6247	232586	2203-001143	CAPCC 200PF J 50V
C6248	232586	2203-001143	CAPCC 200PF J 50V
C6250	147624	2401-001545	CAP LYTC 47UF 25V
C6251	197059	2203-000260	CAPCC .01UF 50V
C6255	197059	2203-000260	CAPCC .01UF 50V
C6256	147624	2401-001545	CAP LYTC 47UF 25V
C6257	147624	2401-001545	CAP LYTC 47UF 25V
C6258	197059	2203-000260	CAPCC .01UF 50V
C6259	186999	2202000797	CAPCD .01UF 30% 16V
C6260	147624	2401-001545	CAP LYTC 47UF 25V
C6261	245701	2202-002037	CAPCC .1UF M 50V
C6262	222780	2203-000192	CAPCC .1UF Z 50V
C6263	197059	2203-000260	CAPCC .01UF 50V
C6264	230477	2203-001579	CAPCC .015UF K 50V
C6266	186999	2202000797	CAPCD .01UF 30% 16V
C6E01	186999	2202000797	CAPCD .01UF 30% 16V
C801	245704	2401-002144	CAP LYTC 47UF M 16V
C802	245701	2202-002037	CAPCC .1UF M 50V
C803	245704	2401-002144	CAP LYTC 47UF M 16V
C804	222780	2203-000192	CAPCC .1UF Z 50V
C805	245687	2401-001730	CAP LYTC 10UF M 50V
C806	245687	2401-001730	CAP LYTC 10UF M 50V
C807	245687	2401-001730	CAP LYTC 10UF M 50V
C808	245687	2401-001730	CAP LYTC 10UF M 50V
C810	245687	2401-001730	CAP LYTC 10UF M 50V
C811	245762	2401-002008	CAP LYTC 100UF M 16V
C812	245687	2401-001730	CAP LYTC 10UF M 50V
C813	245687	2401-001730	CAP LYTC 10UF M 50V
C814	245687	2401-001730	CAP LYTC 10UF M 50V
C815	245687	2401-001730	CAP LYTC 10UF M 50V
C816	245687	2401-001730	CAP LYTC 10UF M 50V
C817	245687	2401-001730	CAP LYTC 10UF M 50V
C819	245687	2401-001730	CAP LYTC 10UF M 50V
C820	245687	2401-001730	CAP LYTC 10UF M 50V
C821	245687	2401-001730	CAP LYTC 10UF M 50V
C823	245687	2401-001730	CAP LYTC 10UF M 50V
C824	245687	2401-001730	CAP LYTC 10UF M 50V
C825	245687	2401-001730	CAP LYTC 10UF M 50V
C826	245687	2401-001730	CAP LYTC 10UF M 50V
C827	245687	2401-001730	CAP LYTC 10UF M 50V

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
C828	245704	2401-002144	CAP LYTC 47UF M 16V	L3205	186692	2702000108	INDUCTOR
C829	245701	2202-002037	CAPCC .1UF M 50V	L3206	196197	2702-000120	COIL
C830	227898	2401001479	CAP LYTC 47UF M 10V	L3207	186692	2702000108	INDUCTOR
C832	245704	2401-002144	CAP LYTC 47UF M 16V	L3208	251308	2702-000163	COIL 470UH
C833	198572	2202000279	CAPCD 47PF J 50V	L401	227549	2701-000002	COIL
C834	242987	2202-000121	CAPCD 100PF K 50V	L4M01	227549	2701-000002	COIL
C835	242991	2401-002299	CAP LYTC 4.7UF M 50V	L5201	227549	2701-000002	COIL
C838	245687	2401-001730	CAP LYTC 10UF M 50V	L5202	227549	2701-000002	COIL
C839	245687	2401-001730	CAP LYTC 10UF M 50V	L5204	229181	2701-000168	COIL
C842	245703	2401-000414	CAP LYTC 10UF M 16V	L6201	248656	2702-000106	COIL INDUCTOR
C844	245688	2401-002036	CAP LYTC 1UF M 50V	L6203	227549	2701-000002	COIL
C845	N/S/P	3811-000389	WIRE	L6204	227549	2701-000002	COIL
C8H1	245688	2401-002036	CAP LYTC 1UF M 50V	L6205	251331	2701-000181	COIL 33UH
CN102	251312	3711-000666	CONNECTOR 12P	L801	186692	2702000108	INDUCTOR
CN3201	233752	3708-000391	CONNECTOR	L802	227549	2701-000002	COIL
CN3202	229171	3711-002445	CONNECTOR	L803	240688	2701-000145	COIL
CN3203	245714	3708-001302	CONNECTOR	LD6201	245738	0601-000517	DIODE LED
CN323B	245715	3809-001110	CABLE FLAT 7P	LD621A	247767	AC61-21009A	HOLDER LED
CN5201	251313	3711-000596	CONNECTOR 10P	PT6201	251323	0604-001206	SENSOR PHOTO
CN6201	245716	AC39-20817S	CONNECTOR ASSEMBLY	PT6202	251323	0604-001206	SENSOR PHOTO
CN6202	251371	3711-000606	CONNECTOR 11P	Q3201	245820	501-000303	TRANSISTOR
CN6204	245717	3711-003749	CONNECTOR 8P	Q3202	245820	501-000303	TRANSISTOR
CN6205	245718	3708-001163	CONNECTOR 5P	Q3203	186642	0501-000398	TRANSISTOR
CN625B	245719	3809-001112	CABLE FLAT 5P	Q3204	245820	501-000303	TRANSISTOR
CN702	251332	3711-004319	CONNECTOR 15P	Q3205	212671	0501-000442	TRANSISTOR
D3201	240679	0401-000101	DIODE	Q3206	245820	501-000303	TRANSISTOR
D3202	240679	0401-000101	DIODE	Q3207	212671	0501-000442	TRANSISTOR
D6201	155276	0402-000127	DIODE	Q3208	212671	0501-000442	TRANSISTOR
D6202	240679	0401-000101	DIODE	Q3211	186642	0501-000398	TRANSISTOR
D6203	155276	0402-000127	DIODE	Q6201	186642	0501-000398	TRANSISTOR
D6204	240679	0401-000101	DIODE	Q6202	245820	501-000303	TRANSISTOR
D6205	240679	0401-000101	DIODE	Q6203	186642	0501-000398	TRANSISTOR
D801	240679	0401-000101	DIODE	Q801	245820	501-000303	TRANSISTOR
D802	240679	0401-000101	DIODE	R3201	251287	2007-000671	RES CCF 1/10W J 2K
D803	240679	0401-000101	DIODE	R3202	251288	2007-000872	RES CCF 1/10W J 4.7K
D805	240679	0401-000101	DIODE	R3203	251289	2007-000241	RES CCF 1/10W 5% 1.5K
FL3201	245728	AC27-80100C	COIL	R3204	251290	2007-000653	RES CCF 1/10W 5% 27K
GP6201	N/S/P	AC61-30181A	PLATE GROUND	R3205	176648	2001000472	RES CF 1/8W 5% 2.7K
IC3201	248650	1204-001644	IC VIDEO PROCESS LA71069M	R3206	251291	2007-000511	RES CCF 1/10W 5%2.4K
IC4M01	245837	1209-001116	IC	R3207	207993	2007-000267	RES CCF 1/10W 5% 1.8K
IC5201	245838	1204-001479	IC AUDIO PROCESSOR	R3208	251292	2007-000002	RES CCF 1/10W 5% 75K
IC6201	251326	AC09-00165A	IC	R3209	251293	2007-000586	RES CCF 1/10W 5% 22K
IC6202	245732	1003-001162	IC MOTOR DRIVER KA3082	R3210	251294	2007-001177	RES CCF 1/10W 5% 8.2K
IC6203	248676	1103-001149	IC EEPROM	R3211	251295	2007-001071	RES 1/10W 5% 8.2K
IC6205	212578	AC14-12006C	IC	R3212	240719	2007-000468	RES CCF 1/10W 5% 1K
IC6206	212578	AC14-12006C	IC	R3213	240778	2001-000449	RES CF 1/8W 5% 2.2K
IC6E01	251327	AC09-00116A	IC	R3214	251296	2007-001195	RES 1/10W 5% 820K
IC801	251328	AC14-12015T	IC	R3215	251289	2007-000241	RES CCF 1/10W 5% 1.5K
J3201	222728	2007-000029	RESISTOR	R3216	207993	2007-000267	RES CCF 1/10W 5% 1.8K
JK801	240706	AC37-20001G	JACK	R3217	251289	2007-000241	RES CCF 1/10W 5% 1.5K
L3201	227549	2701-000002	COIL	R3218	251294	2007-001177	RES CCF 1/10W 5% 8.2K
L3202	186692	2702000108	INDUCTOR	R3220	245989	2007-000300	RES CCF 1/10W 5% 10K
L3204	227549	2701-000002	COIL	R3226	240737	2001-000454	RES CF 1/8W 5% 2.2M

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
R3227	173977	2001-000007	RES CF 1/8W 5% 3K	R5214	240721	2007-000941	RES CCF 1/10W 5% 47K
R3229	248653	2007-000518	RES CCF 1/10W 5% 2.7K	R5215	245986	2007-000290	RES CCF 1/10W 5% 100R
R3230	250458	2007-000221	RES CCF 1/10W 5% 1.2K	R5216	175322	2001000786	RES CF 1/8W 5% 47K
R3231	245988	2007-001055	RES CCF 1/10W 5% 6.2K	R5217	245988	2007-001055	RES CCF 1/10W 5% 6.2K
R3232	251297	2007-001224	RES CCF 1/10W 5% 9.1K	R5218	152004	2001000766	RES CF 1/8W 5% 43K
R3234	175054	2001000522	RES CF 1/8W 5% 22K	R5221	243125	2001-000331	RES CF 1/8W 5% 12K
R3235	249427	2007-000931	RES CCF 1/10W 5% 470R	R5222	230857	2001-000660	RES CF 1/8W 5% 33K
R3236	207993	2007-000267	RES CCF 1/10W 5% 1.8K	R5223	251303	2007-000565	RES CCF 1/10W 5% 220K
R3237	251298	2007-000502	RES CCF 1/10W 5% 2.2R	R5224	248653	2007-000518	RES CCF 1/10W 5% 2.7K
R3238	251299	2007-000449	RES CCF 1/10W 5% 180R	R5225	251287	2007-000671	RES CCF 1/10W J 2K
R3239	175890	2001000613	RES CF 1/8W 5% 3.9K	R5226	175325	2001000281	RES CF 1/8W 5% 100R
R3240	175890	2001000613	RES CF 1/8W 5% 3.9K	R6201	173033	2001000273	RES CF 1/8W 5% 100K
R3241	175054	2001000522	RES CF 1/8W 5% 22K	R6202	161223	2001000429	RES CF 1/8W 5% 1K
R3242	245989	2007-000300	RES CCF 1/10W 5% 10K	R6203	161223	2001000429	RES CF 1/8W 5% 1K
R3244	243125	2001-000331	RES CF 1/8W 5% 12K	R6204	161223	2001000429	RES CF 1/8W 5% 1K
R3245	250461	2007-000572	RES CCF 1/10W 5% 220R	R6205	161223	2001000429	RES CF 1/8W 5% 1K
R3246	251300	2007-000774	RES CCF 1/10W 5%33K	R6206	177535	2001000005	RES CF 390R 1/8W 5%
R3247	240719	2007-000468	RES CCF 1/10W 5% 1K	R6207	249424	2007-000493	RES CCF 1/10W 5% 2.2K
R3248	251288	2007-000872	RES CCF 1/10W J 4.7K	R6211	240719	2007-000468	RES CCF 1/10W 5% 1K
R3249	251301	2007-001001	RES CCF 1/10W 5% 510R	R6212	175054	2001000522	RES CF 1/8W 5% 22K
R3250	251301	2007-001001	RES CCF 1/10W 5% 510R	R6213	243079	2001-000515	RES CF 1/8W 5% 220R
R3252	251302	2007-000981	RES CCF 1/10W 5% 6K	R6214	157336	2001-000290	RES CF 1/8W 5% 10K
R3253	245989	2007-000300	RES CCF 1/10W 5% 10K	R6215	157336	2001-000290	RES CF 1/8W 5% 10K
R3254	248673	2007-000757	RES CCF 1/10W 5% 330K	R6216	251293	2007-000586	RES CCF 1/10W 5% 22K
R3255	161223	2001000429	RES CF 1/8W 5% 1K	R6217	250461	2007-000572	RES CCF 1/10W 5% 220R
R3256	251303	2007-000565	RES CCF 1/10W 5% 220K	R6218	161223	2001000429	RES CF 1/8W 5% 1K
R3257	251303	2007-000565	RES CCF 1/10W 5% 220K	R6219	175306	2001000010	RES CF 1/8W 5% 68K
R3258	159643	2001000008	RES CF 1/8W 5% 15K	R6221	160301	2001000458	RES CF 1/8W 5% 2.2R
R3259	248674	2007-000738	RES CCF 1/10W 5% 30K	R6222	161223	2001000429	RES CF 1/8W 5% 1K
R3260	245748	2001-000977	RES CF 1/8W 5% 8.2K	R6223	245989	2007-000300	RES CCF 1/10W 5% 10K
R3261	240723	2007-000964	RES CCF 1/10W 5% 5.1K	R6224	161223	2001000429	RES CF 1/8W 5% 1K
R3262	175322	2001000786	RES CF 1/8W 5% 47K	R6225	161223	2001000429	RES CF 1/8W 5% 1K
R3267	246765	2001-000595	RES CF 1/8W 5% 3.3M	R6226	175412	2001000780	RES CF 1/8W 5% 470R
R3295	240721	2007-000941	RES CCF 1/10W 5% 47K	R6227	175412	2001000780	RES CF 1/8W 5% 470R
R3297	245989	2007-000300	RES CCF 1/10W 5% 10K	R6228	245989	2007-000300	RES CCF 1/10W 5% 10K
R3299	175322	2001000786	RES CF 1/8W 5% 47K	R6229	245989	2007-000300	RES CCF 1/10W 5% 10K
R401	151453	2001000995	RES CF 1/8W 5% 820R	R6230	240719	2007-000468	RES CCF 1/10W 5% 1K
R402	151453	2001000995	RES CF 1/8W 5% 820R	R6231	210853	2007-000822	RES CCF 1/10W 5% 390R
R4M02	175325	2001000281	RES CF 1/8W 5% 100R	R6232	243132	2001-000837	RES CF 1/8W 5% 51K
R4M03	175325	2001000281	RES CF 1/8W 5% 100R	R6233	210853	2007-000822	RES CCF 1/10W 5% 390R
R4M04	249426	2007-000477	RES CCF 1/10W 5% 1M	R6234	251293	2007-000586	RES CCF 1/10W 5% 22K
R4M05	251376	2007-001097	RES CCF 1/10W 5% 62K	R6235	248674	2007-000738	RES CCF 1/10W 5% 30K
R4M06	251377	2007-000686	RES CCF 1/10W 5% 3.3K	R6236	240725	2007-001039	RES CCF 1/10W 5% 56K
R4M07	240722	2007-000844	RES CCF 1/10W 5% 3K	R6237	161223	2001000429	RES CF 1/8W 5% 1K
R4M08	251378	2007-000710	RES CCF 1/0W 5% 3.9K	R6238	243132	2001-000837	RES CF 1/8W 5% 51K
R4M13	246001	2007-000282	RES CCF 1/10W 5% 100K	R6239	240719	2007-000468	RES CCF 1/10W 5% 1K
R5201	175325	2001000281	RES CF 1/8W 5% 100R	R6240	240719	2007-000468	RES CCF 1/10W 5% 1K
R5202	175325	2001000281	RES CF 1/8W 5% 100R	R6241	161223	2001000429	RES CF 1/8W 5% 1K
R5203	251365	2007-000593	RES CCF 1/10W 5% 22R	R6242	245989	2007-000300	RES CCF 1/10W 5% 10K
R5204	251366	2007-000703	RES CCF 1/10W 5% 3.6K	R6243	251288	2007-000872	RES CCF 1/10W J 4.7K
R5207	245988	2007-001055	RES CCF 1/10W 5% 6.2K	R6244	245989	2007-000300	RES CCF 1/10W 5% 10K
R5209	173939	2001000878	RES CF 1/8W 5% 6.2K	R6245	251288	2007-000872	RES CCF 1/10W J 4.7K
R5210	251379	2007-000003	RES CCF 1/10W 5% 43K	R6246	245989	2007-000300	RES CCF 1/10W 5% 10K

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
R6247	251288	2007-000872	RES CCF 1/10W J 4.7K
R6248	243123	2001-000864	RES CF 1/8W 5% 56K
R6249	161223	2001000429	RES CF 1/8W 5% 1K
R6250	243085	2001-000563	RES CF 1/8W 5% 27K
R6251	161223	2001000429	RES CF 1/8W 5% 1K
R6252	240719	2007-000468	RES CCF 1/10W 5% 1K
R6253	243123	2001-000864	RES CF 1/8W 5% 56K
R6258	161223	2001000429	RES CF 1/8W 5% 1K
R6261	161223	2001000429	RES CF 1/8W 5% 1K
R6262	161223	2001000429	RES CF 1/8W 5% 1K
R6263	161223	2001000429	RES CF 1/8W 5% 1K
R6264	161223	2001000429	RES CF 1/8W 5% 1K
R6269	161223	2001000429	RES CF 1/8W 5% 1K
R6270	161223	2001000429	RES CF 1/8W 5% 1K
R6271	251300	2007-000774	RES CCF 1/10W 5%33K
R6272	230493	2003-000259	RES MF 2W 5% 3.9R
R6273	161223	2001000429	RES CF 1/8W 5% 1K
R6274	175322	2001000786	RES CF 1/8W 5% 47K
R6276	161223	2001000429	RES CF 1/8W 5% 1K
R6277	230857	2001-000660	RES CF 1/8W 5% 33K
R6280	251288	2007-000872	RES CCF 1/10W J 4.7K
R6281	240721	2007-000941	RES CCF 1/10W 5% 47K
R6282	251289	2007-000241	RES CCF 1/10W 5% 1.5K
R6283	245989	2007-000300	RES CCF 1/10W 5% 10K
R6284	249424	2007-000493	RES CCF 1/10W 5% 2.2K
R6285	251329	2007-001141	RES CCF 1/10W 5% 7.5K
R6286	251330	2007-001149	RES CCF 1/10W 5% 750K
R6288	248658	2001-000111	RES CF1/4W 5% 150R
R6E01	157336	2001-000290	RES CF 1/8W 5% 10K
R6E02	157336	2001-000290	RES CF 1/8W 5% 10K
R741	173033	2001000273	RES CF 1/8W 5% 100K
R742	173033	2001000273	RES CF 1/8W 5% 100K
R801	155441	2001001026	RES CF 1/8W 5% 910R
R802	161223	2001000429	RES CF 1/8W 5% 1K
R803	245839	2001-000034	RES CF 1/4W J 220R
R804	149603	2001001006	RES CC 1/8W 5% 82R
R806	161223	2001000429	RES CF 1/8W 5% 1K
R807	175325	2001000281	RES CF 1/8W 5% 100R
R808	175325	2001000281	RES CF 1/8W 5% 100R
R809	173979	2001000969	RES CCF 1/8W 5% 75R
R810	240721	2007-000941	RES CCF 1/10W 5% 47K
R811	240721	2007-000941	RES CCF 1/10W 5% 47K
S6201	245750	0603-001011	TRANSISTOR PHOTO
S6201A	248698	AC61-21008A	HOLDER SENSOR
S6202	245750	0603-001011	TRANSISTOR PHOTO
S6202A	248698	AC61-21008A	HOLDER SENSOR
SW401	212622	3408-000127	SWITCH
SW6202	245752	AC34-20100B	SWITCH
SW6203	245753	AC34-20100A	SWITCH
TM401	251335	AC40-00001M	CIRCUIT TUNER
TM401B	N/S/P	AC61-00135A	CONNECTOR BOARD ASY
TP6201	N/S/P	3811-000389	WIRE
TP801	N/S/P	3811-000389	WIRE

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
TP802	N/S/P	3811-000389	WIRE
TP803	N/S/P	3811-000389	WIRE
TP804	N/S/P	3811-000389	WIRE
TP805	N/S/P	3811-000389	WIRE
VR4M01	227590	2103-000171	RESISTOR
W2118	161223	2001000429	RES CF 1/8W 5% 1K
W2119	161223	2001000429	RES CF 1/8W 5% 1K
W2137	161223	2001000429	RES CF 1/8W 5% 1K
W2143	161223	2001000429	RES CF 1/8W 5% 1K
W2148	151448	2001-000405	RES CF 1/8W 5% 180R
W2149	151448	2001-000405	RES CF 1/8W 5% 180R
W2215	222860	3301-000297	BEAD
WQC01	161223	2001000429	RES CF 1/8W 5% 1K
WQC02	161223	2001000429	RES CF 1/8W 5% 1K
XT3201	243148	2801-003610	CRISTAL 3.57MHZ
XT6201	245756	2801-003139	CRYSTAL 8MHZ
XT6202	245757	2801-003318	CRYSTAL 32.768KHZ
XT6203	212664	2801-001384	CRYSTAL
FUNCTION/TIMER			
C703	186999	2202000797	CAPCD .01UF 30% 16V
C704	186763	2401002165	CAP LYTC 100UF M 16V
C705	245760	2202-000173	CAPCD .001UF K 50V
CN703	251338	3710-001513	CONNECTOR 27P
CN704	251339	3710-001512	CONNECTOR 15P
CN705	251381	AC39-00044A	CABLE
D702	240679	0401-000101	DIODE
D703	240679	0401-000101	DIODE
D704	240679	0401-000101	DIODE
D705	240679	0401-000101	DIODE
D706	N/S/P	3811-000389	WIRE
DT701	251382	AC07-00001A	DISPLAY
DT701A	N/S/P	AC61-00003A	HOLDER DIGITRON
JK701	245850	AC37-22002H	JACK
L702	227549	2701-000002	COIL
Q701	245820	501-000303	TRANSISTOR
Q702	245820	501-000303	TRANSISTOR
Q703	245820	501-000303	TRANSISTOR
Q704	245820	501-000303	TRANSISTOR
Q705	245820	501-000303	TRANSISTOR
Q706	245820	501-000303	TRANSISTOR
Q707	245820	501-000303	TRANSISTOR
Q708	245820	501-000303	TRANSISTOR
Q709	245820	501-000303	TRANSISTOR
Q710	245820	501-000303	TRANSISTOR
R719	173033	2001000273	RES CF 1/8W 5% 100K
R720	173033	2001000273	RES CF 1/8W 5% 100K
R721	173033	2001000273	RES CF 1/8W 5% 100K
R722	173033	2001000273	RES CF 1/8W 5% 100K
R723	173033	2001000273	RES CF 1/8W 5% 100K
R724	173033	2001000273	RES CF 1/8W 5% 100K
R725	173033	2001000273	RES CF 1/8W 5% 100K
R726	173033	2001000273	RES CF 1/8W 5% 100K

REPLACEMENT PARTS (Continued)

Symbol	Stock	Drawing	Description
R727	173033	2001000273	RES CF 1/8W 5% 100K
R728	173033	2001000273	RES CF 1/8W 5% 100K
R729	173033	2001000273	RES CF 1/8W 5% 100K
R730	173033	2001000273	RES CF 1/8W 5% 100K
R731	173033	2001000273	RES CF 1/8W 5% 100K
R732	173033	2001000273	RES CF 1/8W 5% 100K
R733	173033	2001000273	RES CF 1/8W 5% 100K
R734	173033	2001000273	RES CF 1/8W 5% 100K
R735	173033	2001000273	RES CF 1/8W 5% 100K
R736	173033	2001000273	RES CF 1/8W 5% 100K
R737	173033	2001000273	RES CF 1/8W 5% 100K
R738	173033	2001000273	RES CF 1/8W 5% 100K
R740	251336	2001-000110	RES CF 1/4W 5% 10R
R743	157336	2001-000290	RES CF 1/8W 5% 10K
R744	173979	2001000969	RES CCF 1/8W 5% 75R
RM701	251383	AC32-00004A	RECEIVER REMOTE
SW701	245754	3404-000165	SWITCH
SW702	245754	3404-000165	SWITCH
SW703	245754	3404-000165	SWITCH
SW704	245754	3404-000165	SWITCH
SW706	245754	3404-000165	SWITCH
SW707	245754	3404-000165	SWITCH
SW708	245754	3404-000165	SWITCH
SW709	245754	3404-000165	SWITCH
SW710	245754	3404-000165	SWITCH
SW711	245754	3404-000165	SWITCH
SW712	245754	3404-000165	SWITCH
SW713	245754	3404-000165	SWITCH
ZD701	251337	0403-000509	DIODE ZENER
INCLUDED ACCESSORIES			
BAT	N/S/P	AC43-12002J	BATTERY
CAB	207417	AC3942001J	CABLE, RF
RMT	251390	AC59-00002K	TRANSMITTER, REMOTE
INSTRUMENT ASSEMBLY			
1	251358	AC97-01118A	● PANEL, FRONT ASY
3	251362	AC64-00438A	DOOR, PANEL
101	251357	AC64-00467A	● CABINET, TOP
102	251363	AC63-00021A	● COVER, BOTTOM
102	251363	AC63-00021A	● COVER, BOTTOM
103	245683	AC61-11051A	BRACKET, FRAME
153	186621	AC60-12126A	SCREW
155	192217	AC60-12134A	SCREW
157	218991	AC60-10063A	SCREW
200	245686	AC39-10200N	CORD, POWER
21	251360	AC64-00437A	DOOR, CASSETTE
22	251361	AC64-00437B	DOOR, CASSETTE
23	245786	AC61-62031A	SPRING
601	N/S/P	AC92-00687A	CIRCUIT, MAIN A
602	N/S/P	AC92-00687B	CIRCUIT, MAIN B
701	N/S/P	AC94-00055A	FUNCTION/TIMER
MECHANICAL ASSEMBLY			

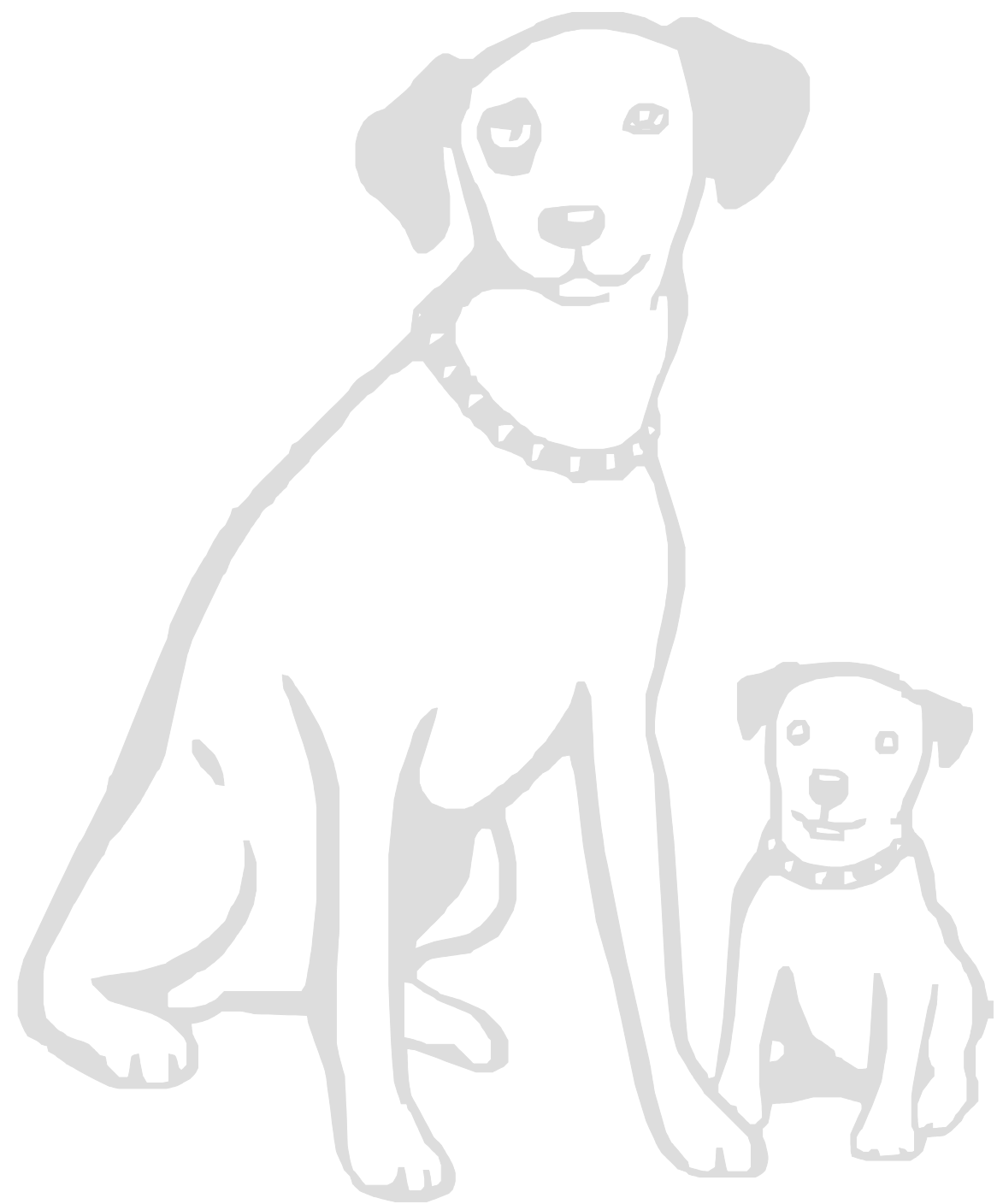
Symbol	Stock	Drawing	Description
B238	245767	AC61-50660A	● SLEEVE, TENSION
B238	245767	AC61-50660A	● SLEEVE, TENSION
B410	248667	AC31-12016D	MOTOR, LOADING ASSEMBLY
B410	248667	AC31-12016D	MOTOR, LOADING ASSEMBLY
B440	245769	AC60-10515A	● SCREW
B440	245769	AC60-10515A	● SCREW
B444	245770	AC66-20571A	GEAR, WORM
B444	245770	AC66-20571A	GEAR, WORM
B446	245771	AC61-21005A	HOLDER
B446	245771	AC61-21005A	HOLDER
B448	245772	AC66-20573A	GEAR, WORM WHEEL
B448	245772	AC66-20573A	GEAR, WORM WHEEL
B452	245773	AC66-20575A	GEAR
B452	245773	AC66-20575A	GEAR
B456	245774	AC66-20576A	GEAR
B456	245774	AC66-20576A	GEAR
B458	245775	AC66-20574A	GEAR
B458	245775	AC66-20574A	GEAR
B462	247436	AC60-10517A	● SCREW
B462	247436	AC60-10517A	● SCREW
B473	245779	AC61-60559A	SPRING
B473	245779	AC61-60559A	SPRING
B484	245776	AC66-20580A	GEAR, LOADING
B484	245776	AC66-20580A	GEAR, LOADING
B488	245777	AC66-30543A	LEVER, LOAD ASY
B488	245777	AC66-30543A	LEVER, LOAD ASY
B500	245778	AC66-30542A	LEVER, LOAD ASY
B500	245778	AC66-30542A	LEVER, LOAD ASY
B560	251342	AC31-00006A	MOTOR, CAPSTAN
B560	251342	AC31-00006A	MOTOR, CAPSTAN
B570	245800	AC60-10514A	● SCREW, CAPSTAN
B570	245800	AC60-10514A	● SCREW, CAPSTAN
G001	248668	AC97-00748A	CYLINDER, ASSEMBLY
G001	248668	AC97-00748A	CYLINDER, ASSEMBLY
G420	245792	AC66-80142A	SLIDER, SUPPLY ASSEMBLY
G420	245792	AC66-80142A	SLIDER, SUPPLY ASSEMBLY
G450	245793	AC66-80141A	SLIDER, TAKE UP ASSEMBLY
G450	245793	AC66-80141A	SLIDER, TAKE UP ASSEMBLY
G480	248663	AC33-00003A	HEAD, ASSEMBLY
G480	248663	AC33-00003A	HEAD, ASSEMBLY
G510	248664	6006-001075	● SCREW
G510	248677	006-001075	● SCREW, ASSEMBLY
G520	245794	AC66-30539A	LEVER, GUIDE ASSEMBLY
G520	245794	AC66-30539A	LEVER, GUIDE ASSEMBLY
G527	245795	AC61-60553A	SPRING
G527	245795	AC61-60553A	SPRING
G530	248669	AC33-00002A	HEAD, FE
G530	248669	AC33-00002A	HEAD, FE
G532	245805	AC60-10519A	● SCREW
G532	245805	AC60-10519A	● SCREW
G542	245801	AC66-60051A	BELT, PULLEY
G542	245801	AC66-60051A	BELT, PULLEY
G546	245806	AC66-30535A	LEVER, DOOR

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
G546	245806	AC66-30535A	LEVER, DOOR				
G555	245780	AC59-90403A	ROLLER, PINCH ASSEMBLY				
G555	245780	AC59-90403A	ROLLER, PINCH ASSEMBLY				
G680	245812	AC6630557A	LEVER, H/CLEANER ASSEMBLY				
G680	245812	AC6630557A	LEVER, H/CLEANER ASSEMBLY				
K110	245784	AC66-10267A	REEL				
K110	245784	AC66-10267A	REEL				
K140	245785	AC66-10268A	REEL				
K140	245785	AC66-10268A	REEL				
K182	245790	AC66-30524A	LEVER, IDLER				
K182	245790	AC66-30524A	LEVER, IDLER				
K188	245791	AC66-20577A	GEAR, IDLER				
K188	245791	AC66-20577A	GEAR, IDLER				
K200	245786	AC61-21012A	HOLDER, CLUTCH ASSEMBLY				
K200	245786	AC61-21012A	HOLDER, CLUTCH ASSEMBLY				
K221	245787	AC66-20581A	GEAR, CENTER ASSEMBLY				
K221	245787	AC66-20581A	GEAR, CENTER ASSEMBLY				
K222	245788	AC60-30306A	WASHER				
K222	245788	AC60-30306A	WASHER				
K225	245789	AC66-30547A	LEVER, UP/DOWN ASSEMBLY				
K225	245789	AC66-30547A	LEVER, UP/DOWN ASSEMBLY				
K240	245796	AC66-30538A	LEVER, TENSION ASSEMBLY				
K240	245796	AC66-30538A	LEVER, TENSION ASSEMBLY				
K248	245797	AC61-60554A	SPRING TENSION LEVER				
K248	245797	AC61-60554A	SPRING TENSION LEVER				
K250	245798	AC63-12029A	BRAKE, BAND ASSEMBLY				
K250	245798	AC63-12029A	BRAKE, BAND ASSEMBLY				
K330	245781	AC66-30550A	BRAKE, LEVER ASSEMBLY				
K330	245781	AC66-30550A	BRAKE, LEVER ASSEMBLY				
K340	245782	AC66-30549A	BRAKE, LEVER ASSEMBLY				
K340	245782	AC66-30549A	BRAKE, LEVER ASSEMBLY				
K350	245783	AC61-60564A	SPRING, TENSION				
K350	245783	AC61-60564A	SPRING, TENSION				
K490	245807	AC61-21010B	HOLDER, CASS ASSEMBLY				
K490	245807	AC61-21010B	HOLDER, CASS ASSEMBLY				
K502	245807	AC61-60561A	SPRING				
K502	245807	AC61-60561A	SPRING				
K530	245809	AC66-30546A	LEVER, ARM ASSEMBLY				
K530	245809	AC66-30546A	LEVER, ARM ASSEMBLY				
K546	245810	AC61-50658A	GUIDE, CASS DOOR				
K546	245810	AC61-50658A	GUIDE, CASS DOOR				

EXPLODED VIEWS SUBINDEX

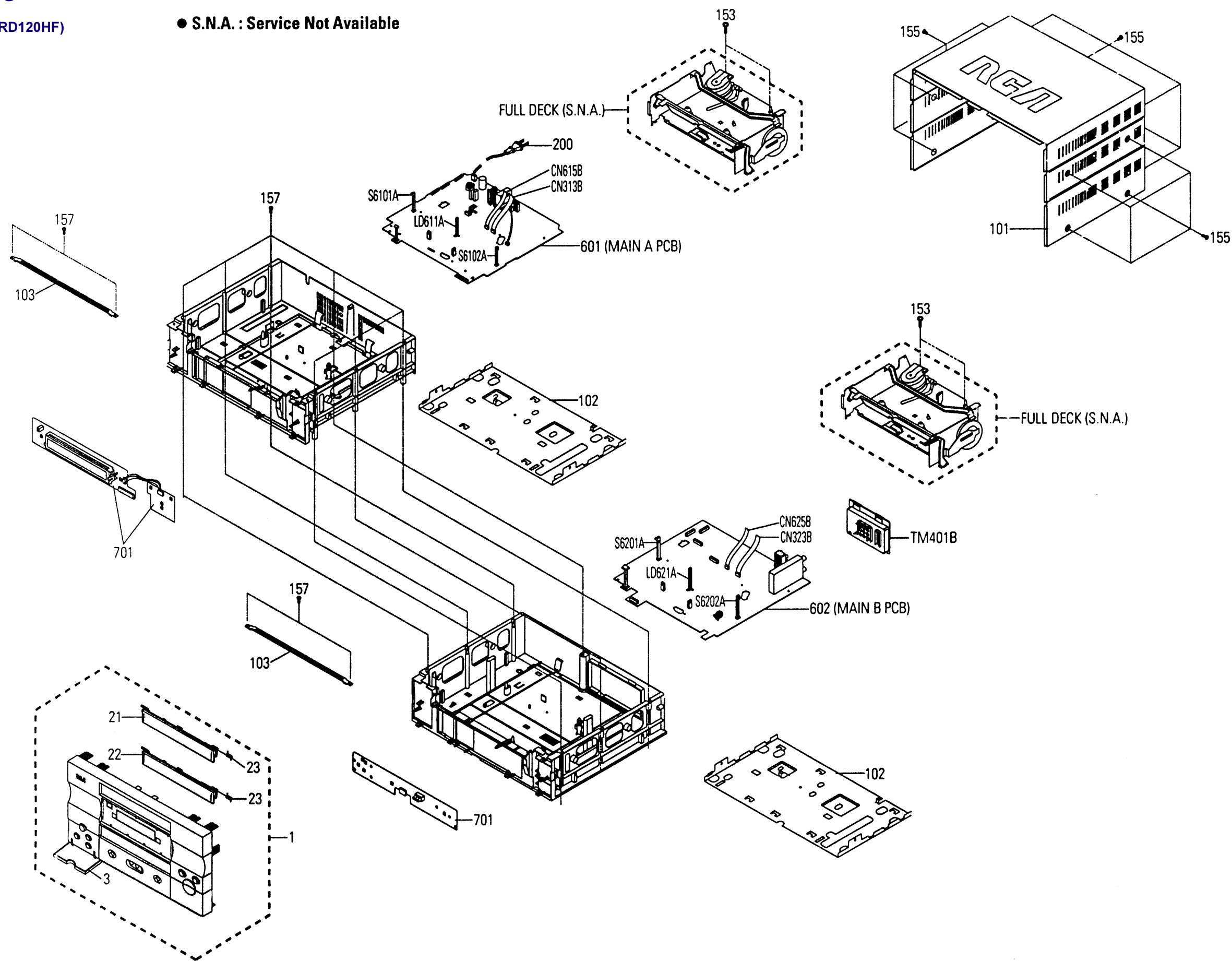
- Instrument Assembly (VRD120HF)
- Instrument Assembly (VRD100)
- Mechanical Parts (Top Side)
- Mechanical Parts (Bottom Side)



VRD100/VRD120HF
EXPLODED VIEWS

Instrument Assembly (VRD120HF)

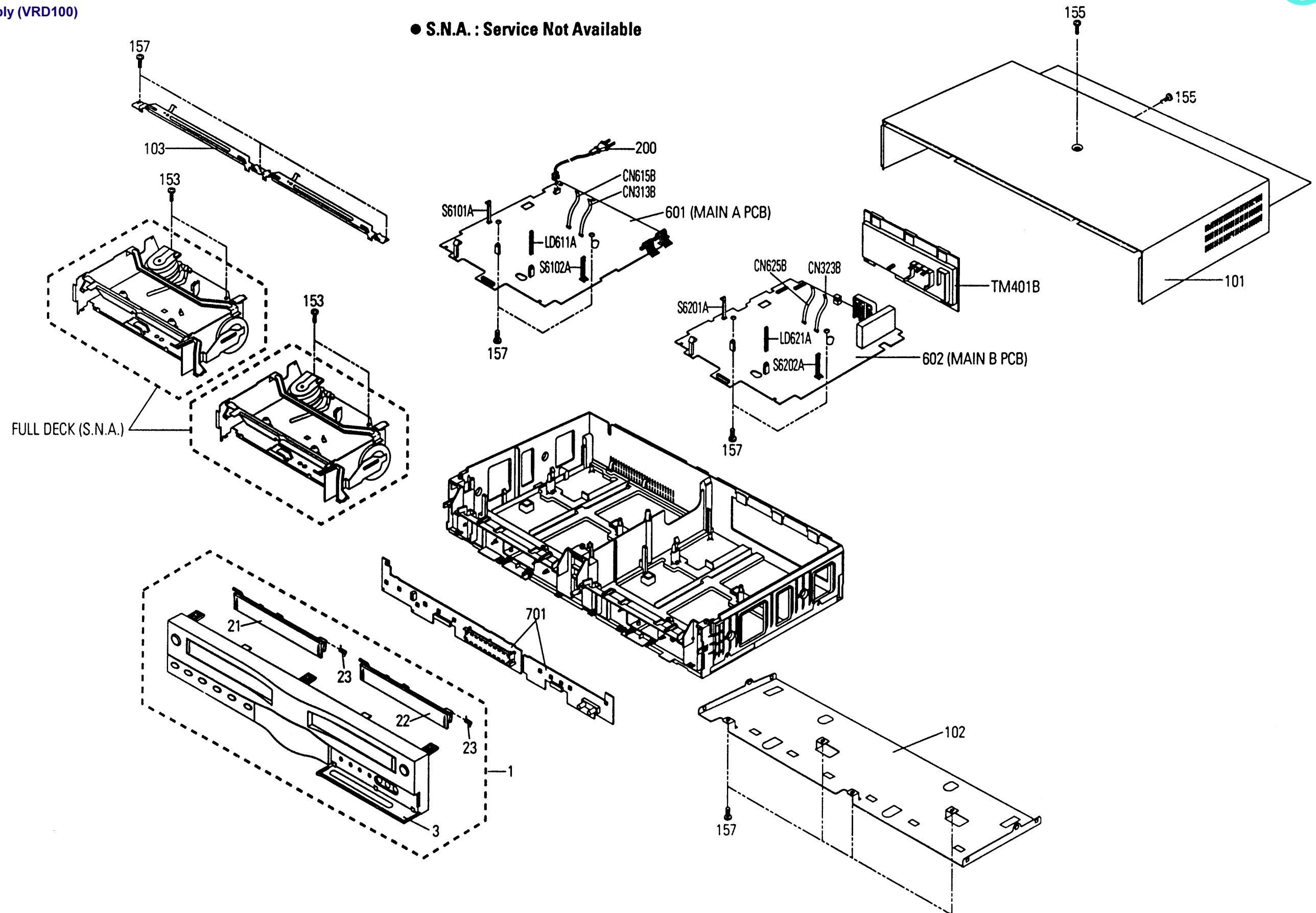
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Instrument Assembly (VRD100)

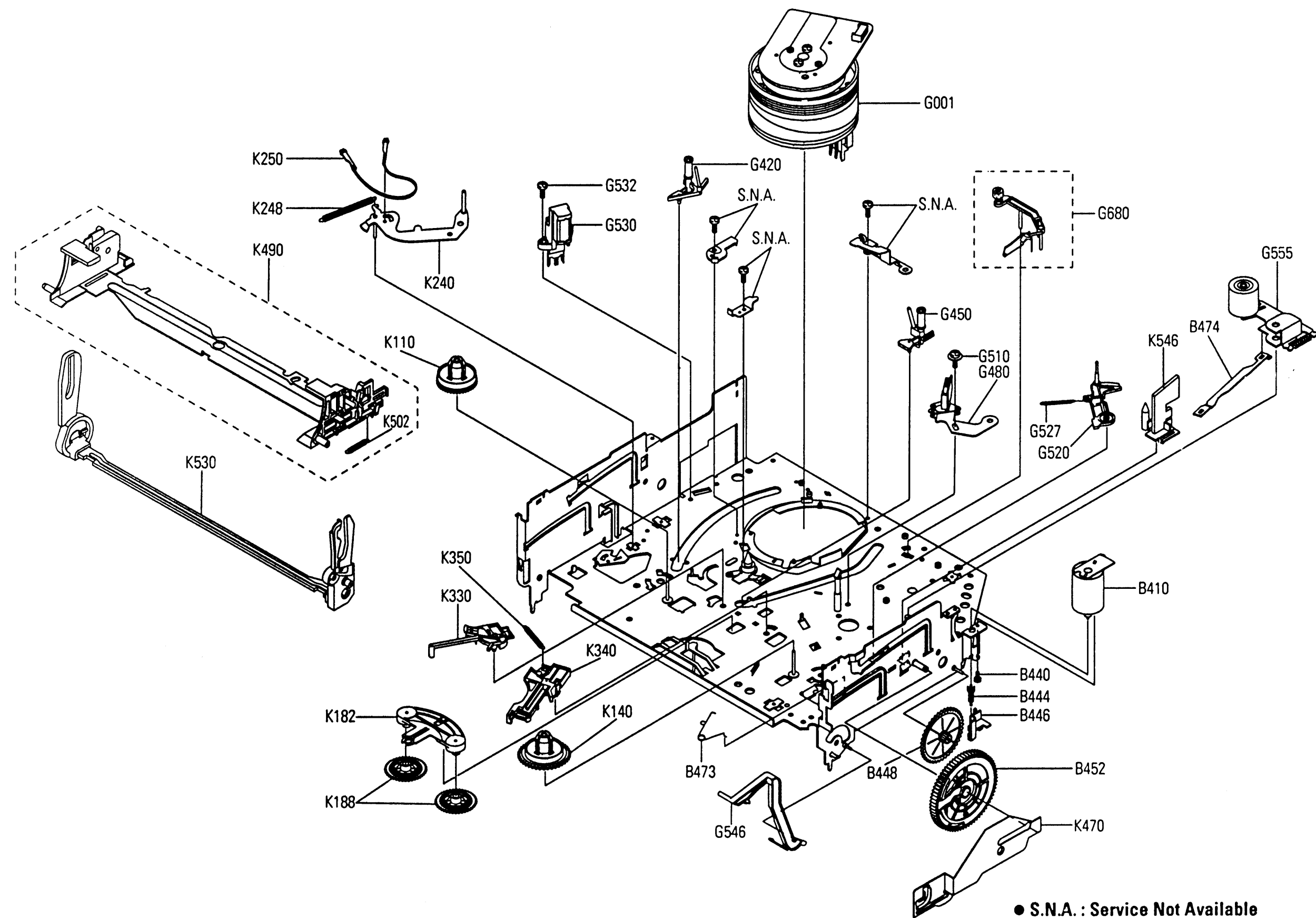


● **S.N.A. : Service Not Available**



VRD100/VRD120HF
EXPLODED VIEWS

Mechanical Parts (Top Side)



● S.N.A. : Service Not Available



VRD100/VRD120HF
EXPLODED VIEWS

Mechanical Parts (Bottom Side)

